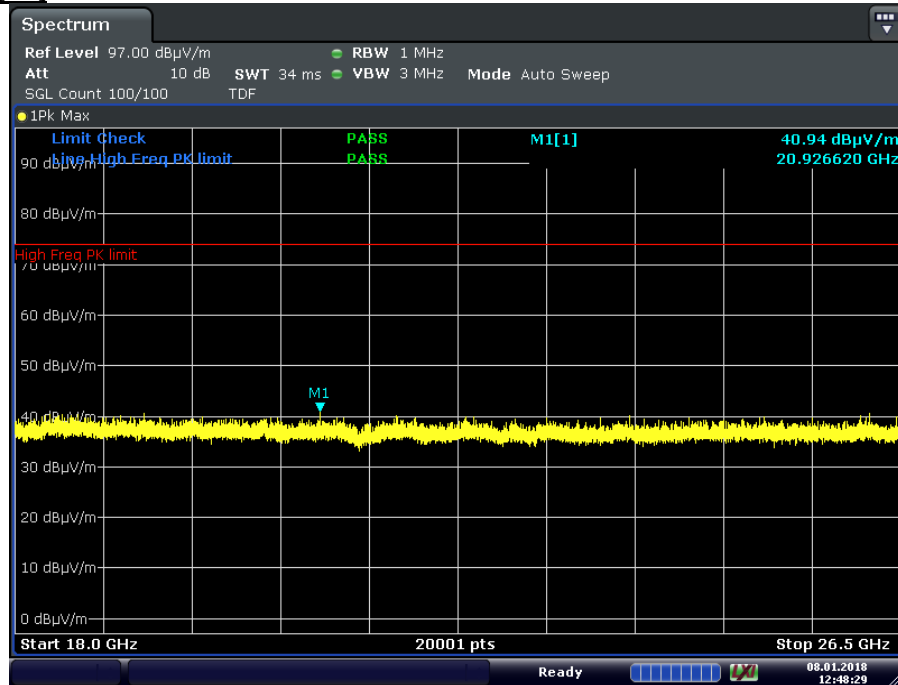


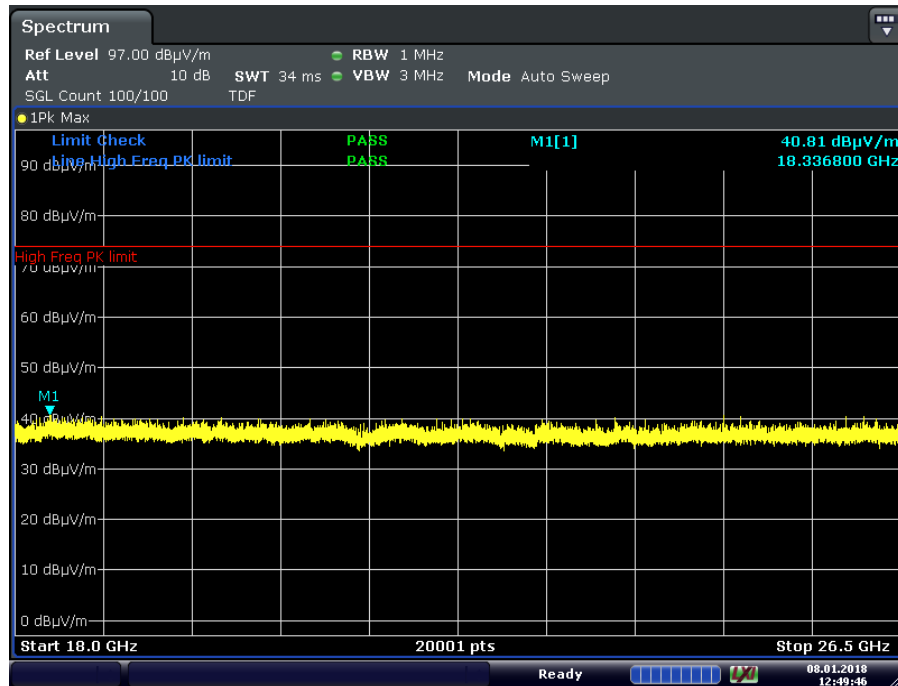
MIMO Radiated Spurious Emissions Measurements (Above 18GHz)

§15.209; RSS-Gen [8.9]



Date: 8 JAN 2018 12:48:30

Plot 7-152. Radiated Spurious Plot above 18GHz MIMO (802.11n – Ch. 7, Ant. Pol. H)



Date: 8 JAN 2018 12:49:47

Plot 7-153. Radiated Spurious Plot above 18GHz MIMO (802.11n – Ch. 7, Ant. Pol. V)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 111 of 157

MIMO Radiated Spurious Emission Measurements

§15.247(d) §15.205 & §15.209; RSS-Gen [8.9]

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2412MHz
Channel: 01

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4824.00	Avg	H	150	224	-79.09	6.93	34.84	53.98	-19.14
4824.00	Peak	H	150	224	-67.88	6.93	46.05	73.98	-27.93
12060.00	Avg	H	-	-	-79.87	18.23	45.36	53.98	-8.61
12060.00	Peak	H	-	-	-68.44	18.23	56.79	73.98	-17.18

Table 7-23. Radiated Measurements MIMO

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2442MHz
Channel: 07

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4884.00	Avg	H	135	259	-79.12	7.02	34.90	53.98	-19.07
4884.00	Peak	H	135	259	-67.22	7.02	46.80	73.98	-27.17
7326.00	Avg	H	-	-	-79.75	11.28	38.53	53.98	-15.45
7326.00	Peak	H	-	-	-68.50	11.28	49.78	73.98	-24.20
12210.00	Avg	H	-	-	-80.14	18.58	45.44	53.98	-8.54
12210.00	Peak	H	-	-	-69.40	18.58	56.18	73.98	-17.80

Table 7-24. Radiated Measurements MIMO

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 112 of 157

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
4944.00	Avg	H	162	2511	-80.14	7.52	34.38	53.98	-19.60
4944.00	Peak	H	162	2511	-68.25	7.52	46.27	73.98	-27.71
7416.00	Avg	H	133	324	-80.17	11.71	38.54	53.98	-15.44
7416.00	Peak	H	133	324	-68.09	11.71	50.62	73.98	-23.36
12360.00	Avg	H	-	-	-80.39	18.74	45.35	53.98	-8.63
12360.00	Peak	H	-	-	-69.40	18.74	56.34	73.98	-17.64

Table 7-25. Radiated Measurements MIMO

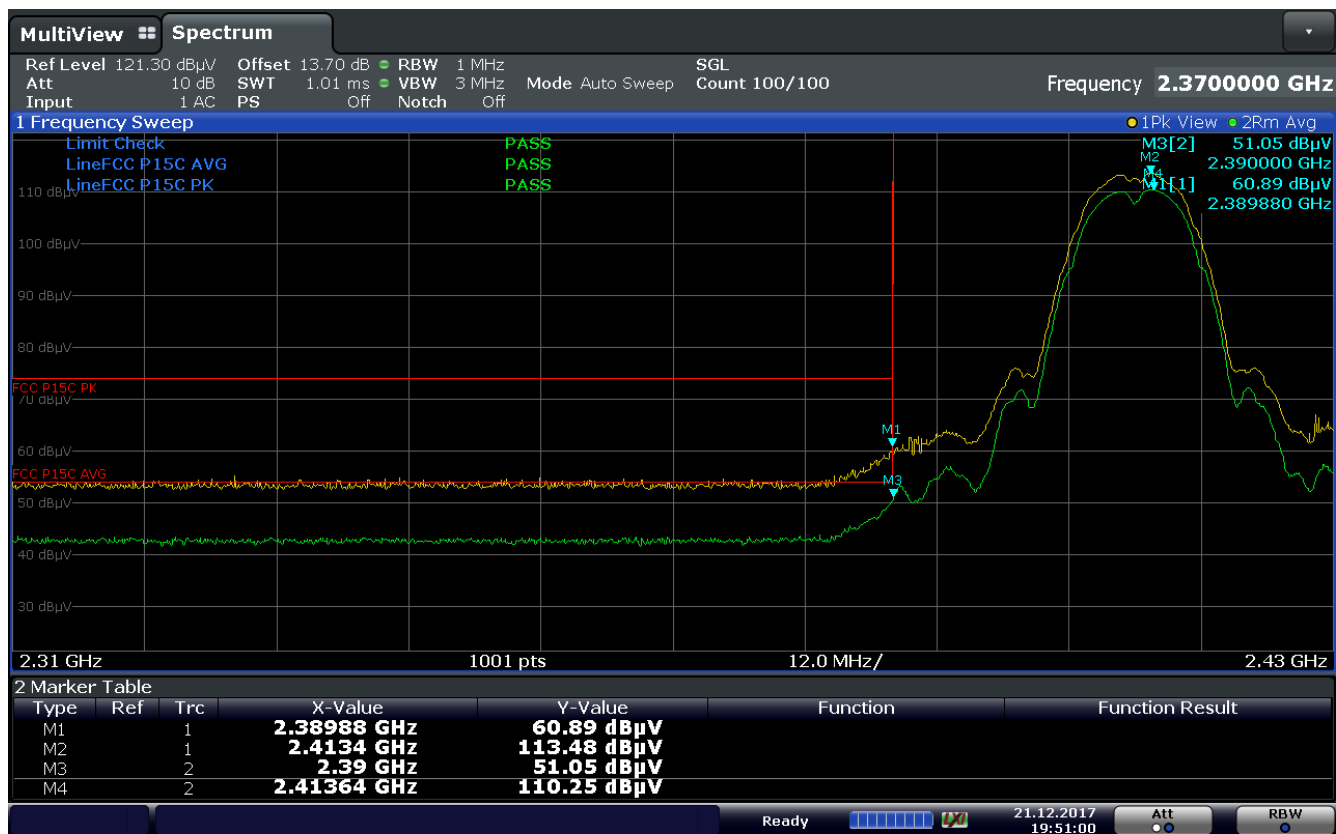
FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 113 of 157

7.7.4 SISO Antenna-1 Radiated Restricted Band Edge Measurements

§15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

Worst Case Mode:	802.11b
Worst Case Transfer Rate:	1Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	2412MHz
Channel:	1



19:51:01 21.12.2017

Plot 7-154. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 114 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2417MHz
Channel: 2



20:01:25 21.12.2017

Plot 7-155. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 115 of 157

Worst Case Mode:	802.11b
Worst Case Transfer Rate:	1Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	2457MHz
Channel:	10



21:24:07 21.12.2017

Plot 7-156. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 116 of 157

Worst Case Mode: 802.11b
 Worst Case Transfer Rate: 1Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11

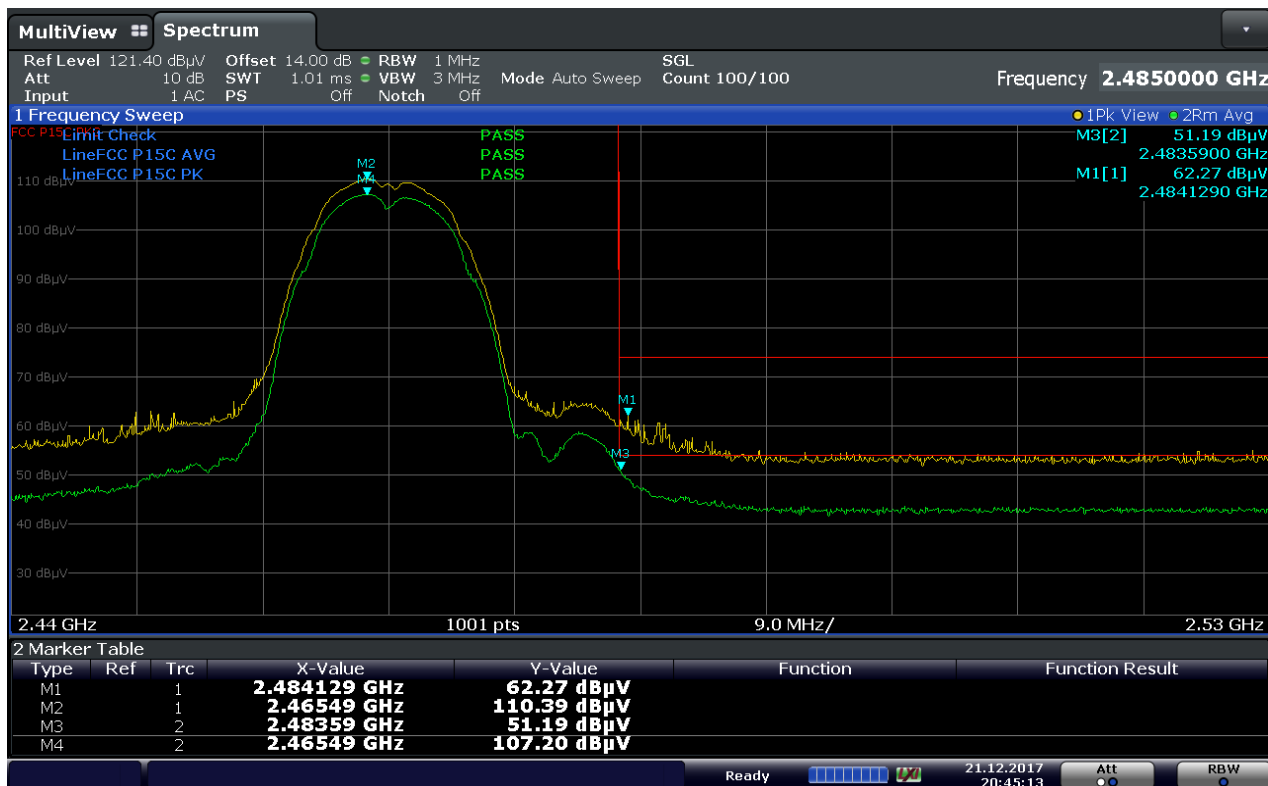


21:12:39 21.12.2017

Plot 7-157. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 117 of 157

Worst Case Mode: 802.11b
 Worst Case Transfer Rate: 1Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2467MHz
 Channel: 12

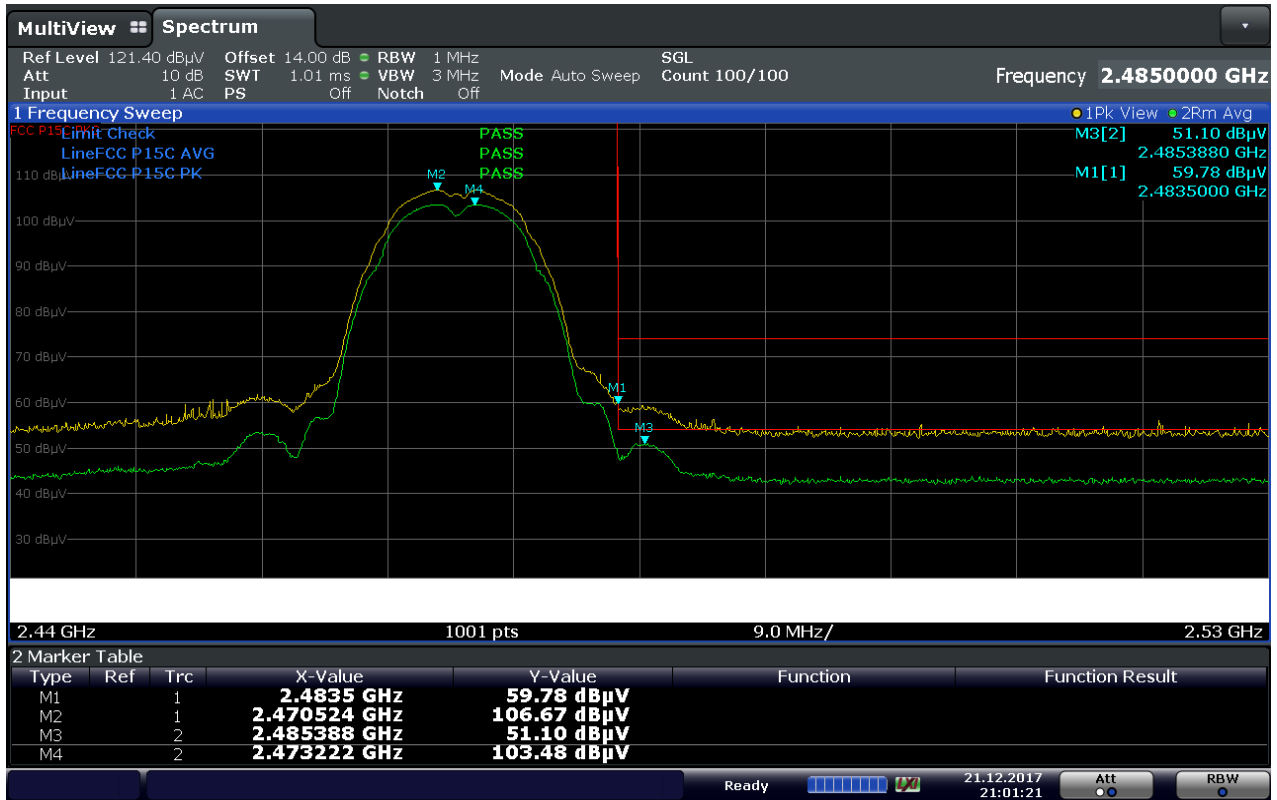


20:45:14 21.12.2017

Plot 7-158. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 118 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13



21:01:21 21.12.2017

Plot 7-159. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 119 of 157

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2412MHz
Channel: 1



01:09:04 16.12.2017

Plot 7-160. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 120 of 157

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2417MHz
 Channel: 2

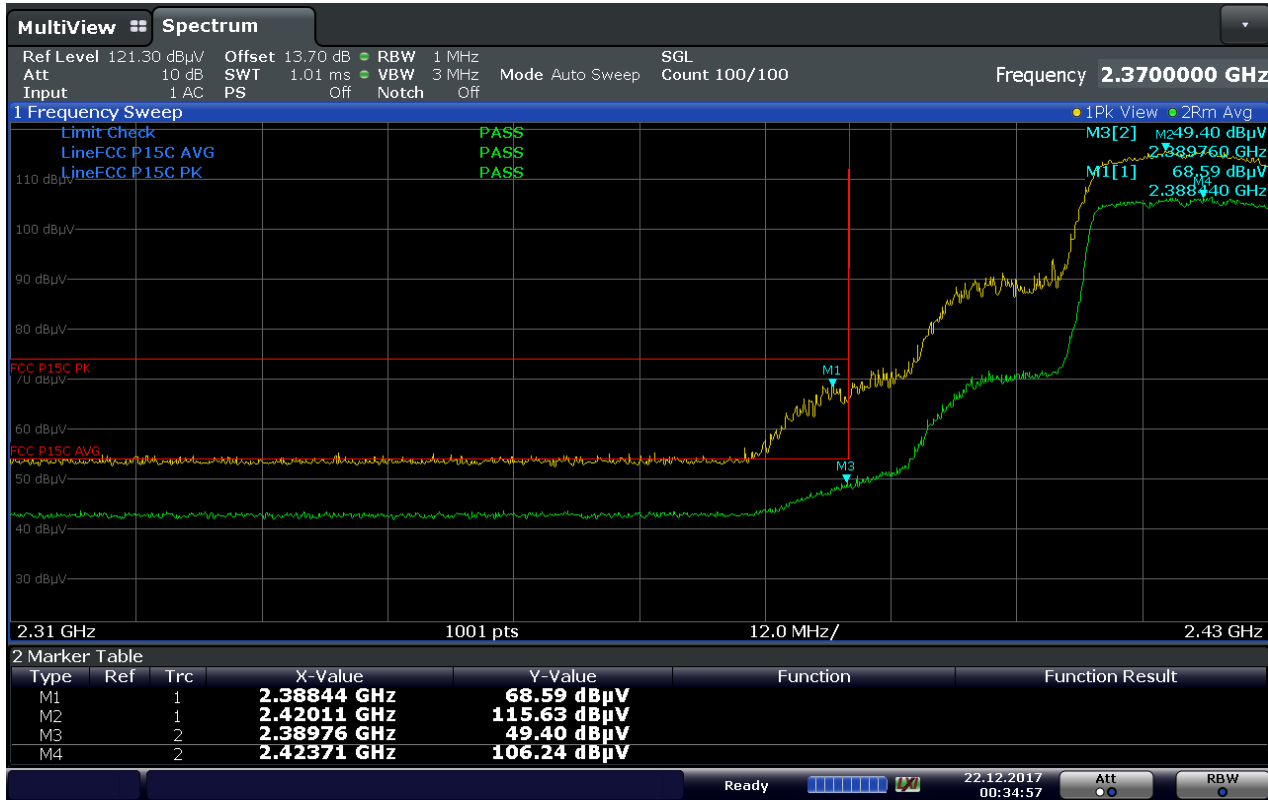


00:06:39 22.12.2017

Plot 7-161. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 121 of 157

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2422MHz
Channel: 3



00:34:57 22.12.2017

Plot 7-162. Radiated Restricted Lower Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 122 of 157

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2457MHz
 Channel: 10

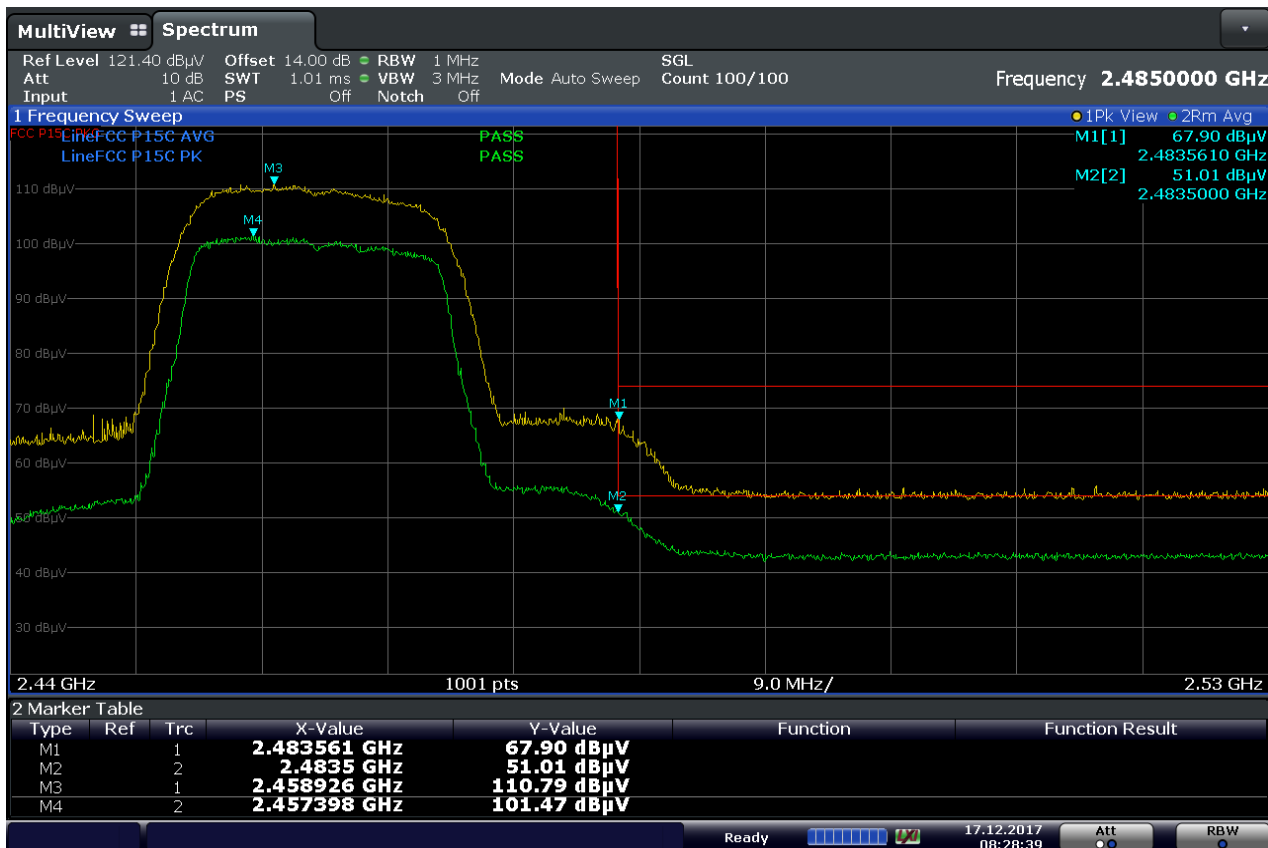


17:00:17 26.12.2017

Plot 7-163. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 123 of 157

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11

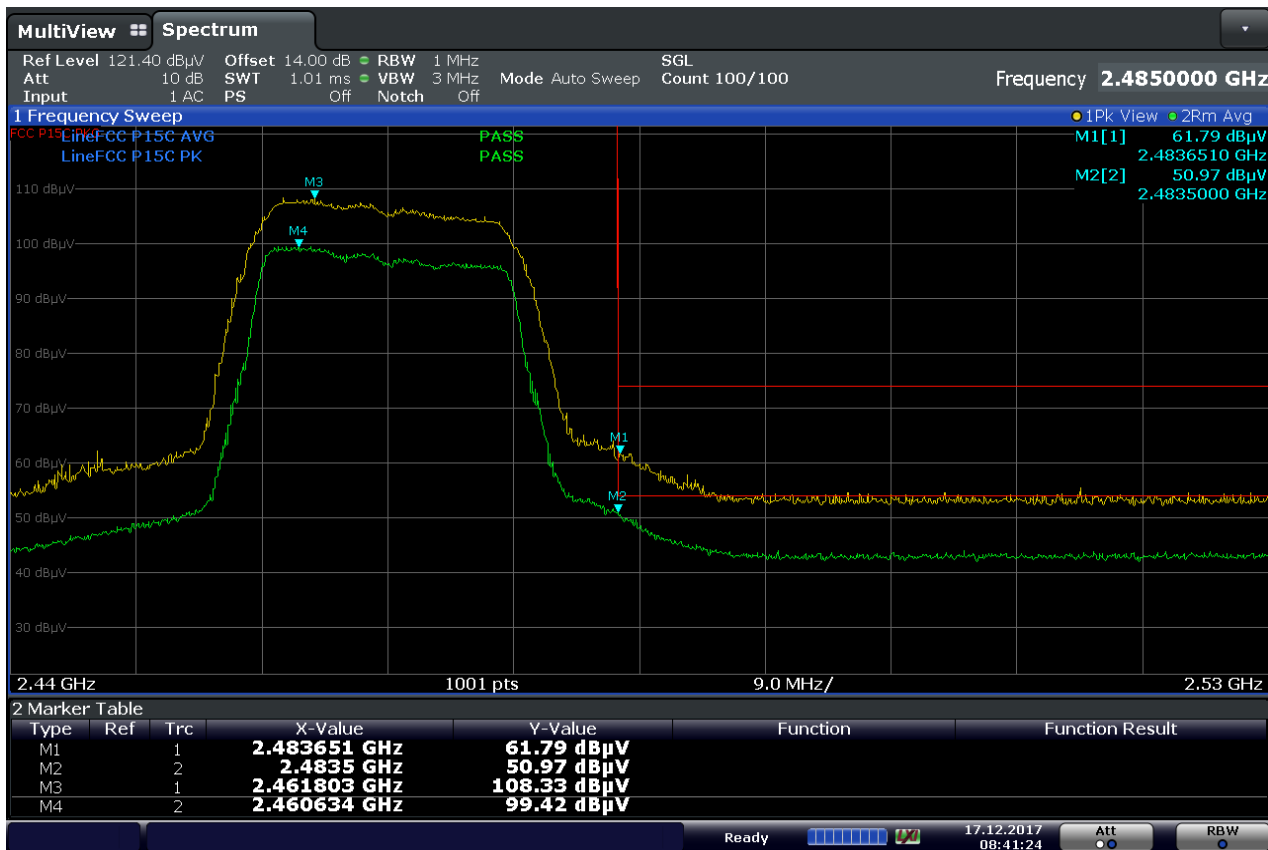


08:28:39 17.12.2017

Plot 7-164. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 124 of 157

Worst Case Mode: 802.11n
 Worst Case Transfer Rate: MCS0
 Distance of Measurements: 3 Meters
 Operating Frequency: 2467MHz
 Channel: 12



08:41:25 17.12.2017

Plot 7-165. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

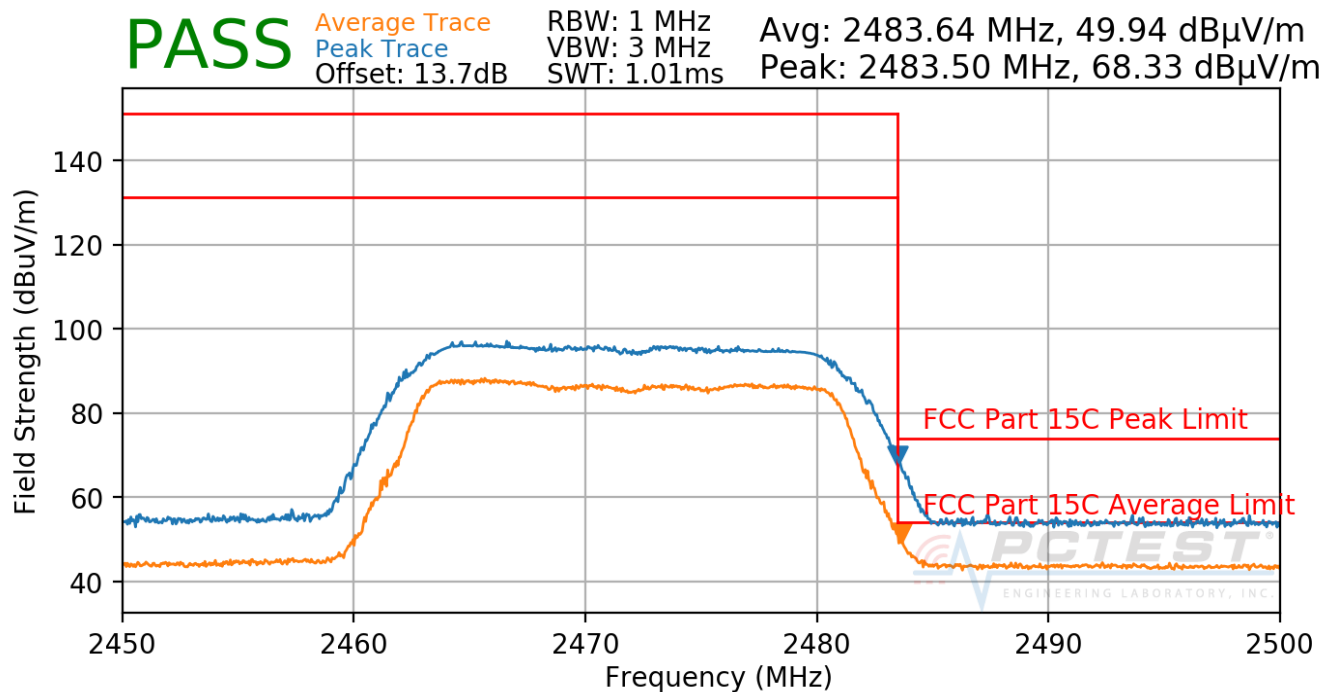
FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 125 of 157

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V 7.3 11/30/2017

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Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13



Plot 7-166. Radiated Restricted Higher Band Edge Measurement SISO ANT1 (Average & Peak)

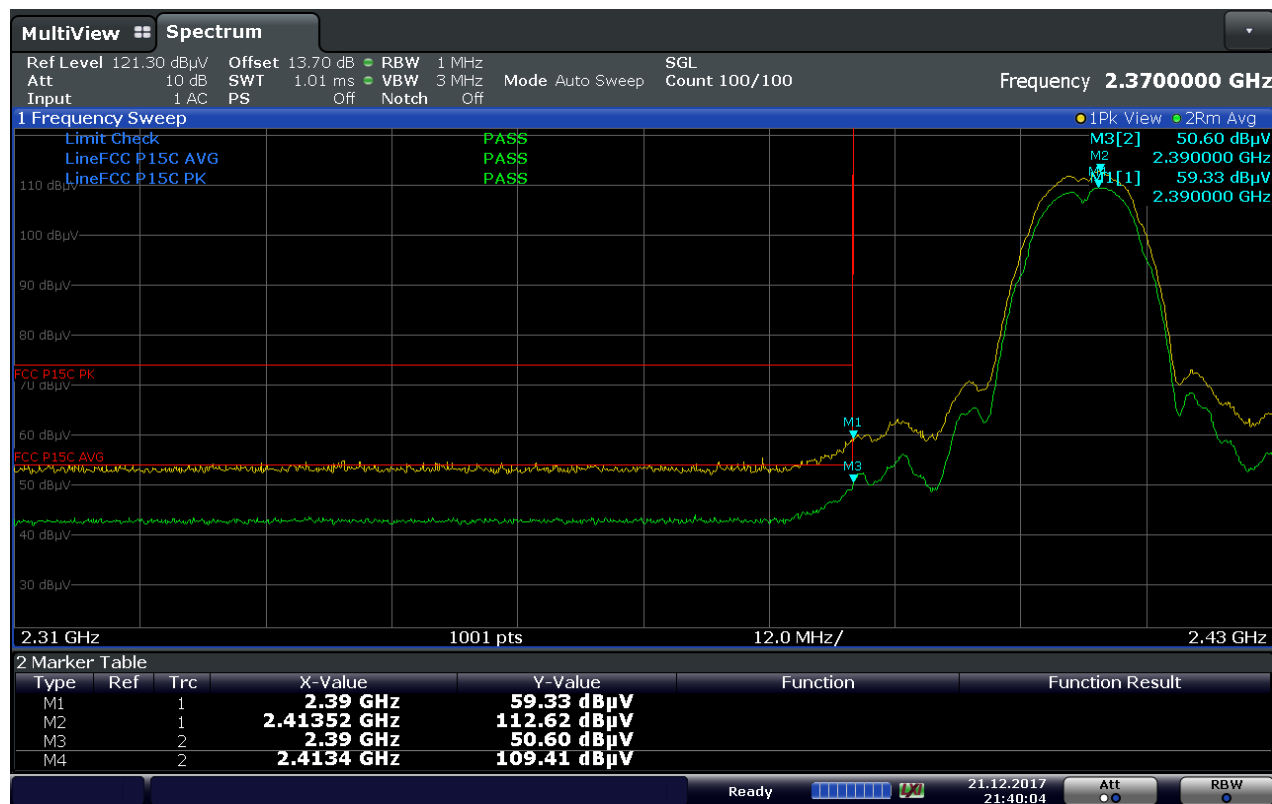
FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 126 of 157

7.7.5 SISO Antenna-2 Radiated Restricted Band Edge Measurements

§15.205 §15.209; RSS-Gen [8.9]

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting.

Worst Case Mode:	802.11b
Worst Case Transfer Rate:	1Mbps
Distance of Measurements:	3 Meters
Operating Frequency:	2412MHz
Channel:	1

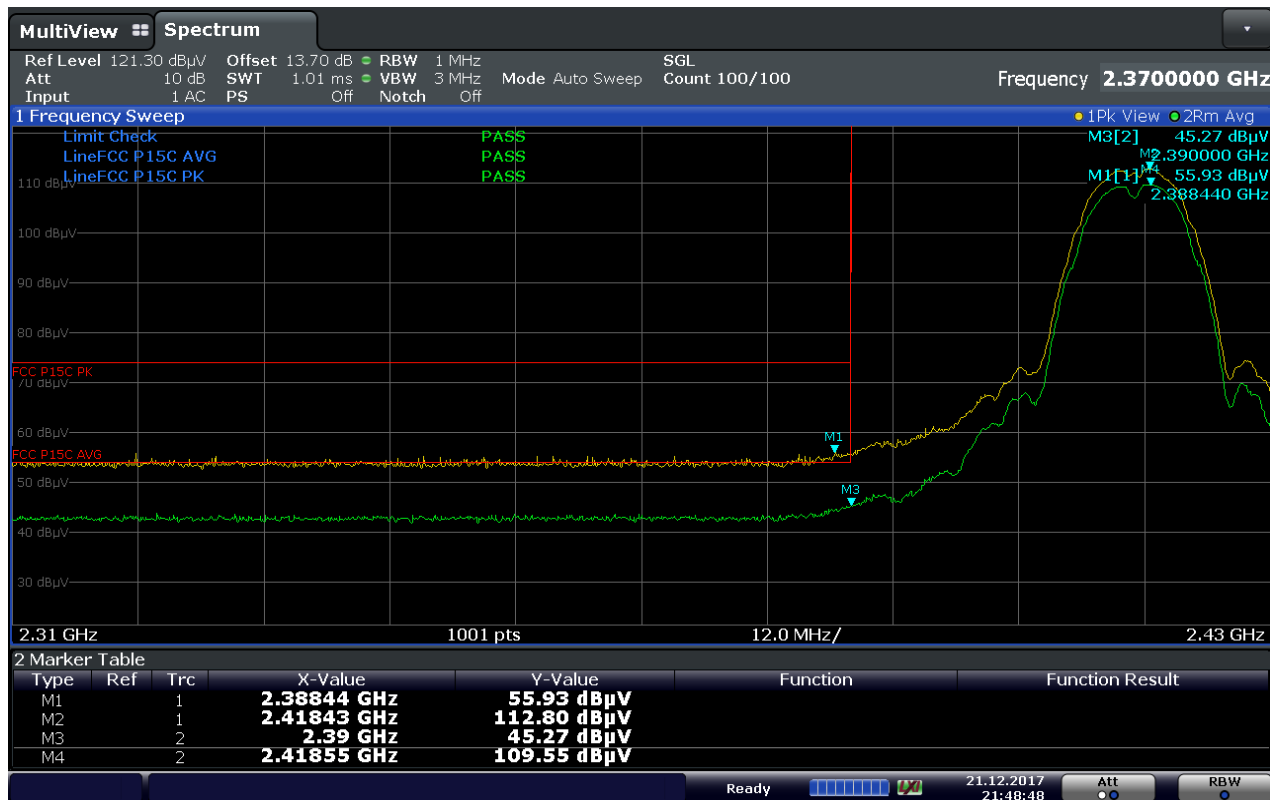


21:40:04 21.12.2017

Plot 7-167. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 127 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2417MHz
Channel: 2



21:48:48 21.12.2017

Plot 7-168. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 128 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2457MHz
Channel: 10



23:05:02 21.12.2017

Plot 7-169. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 129 of 157

Worst Case Mode: 802.11b
 Worst Case Transfer Rate: 1Mbps
 Distance of Measurements: 3 Meters
 Operating Frequency: 2462MHz
 Channel: 11

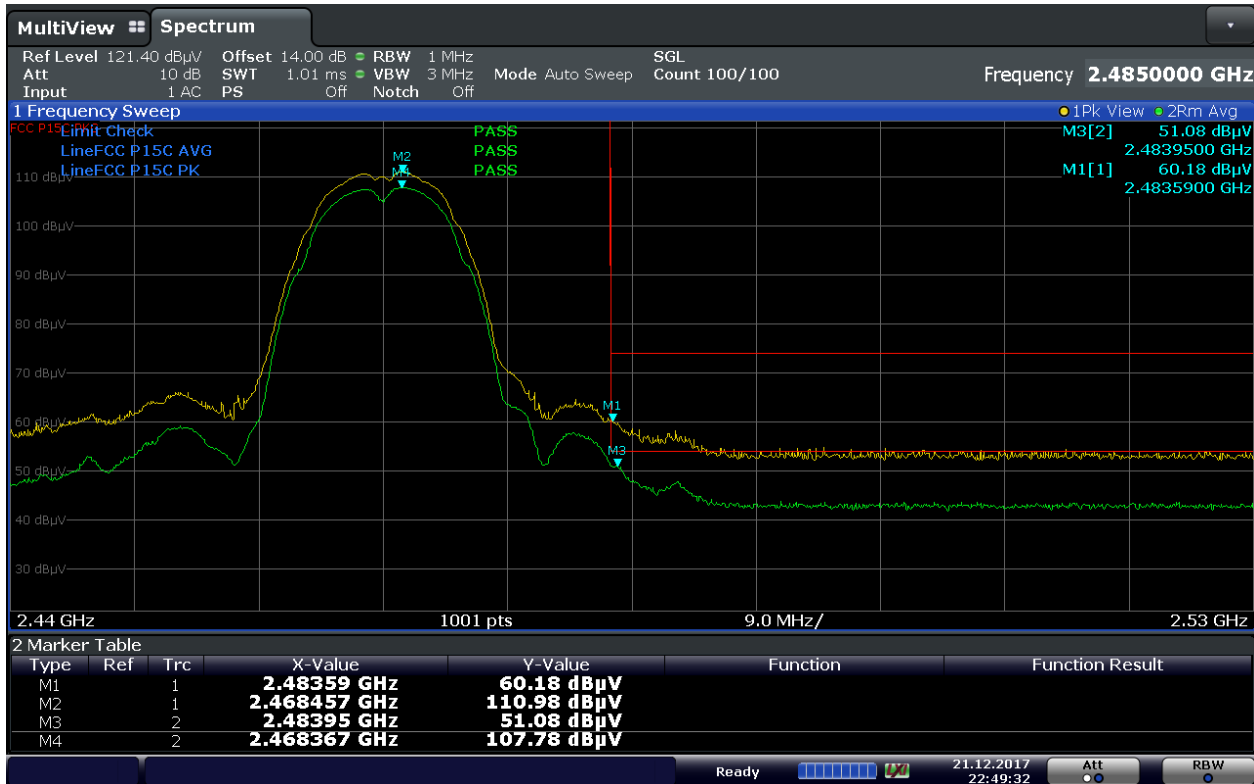


22:56:45 21.12.2017

Plot 7-170. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 130 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2467MHz
Channel: 12

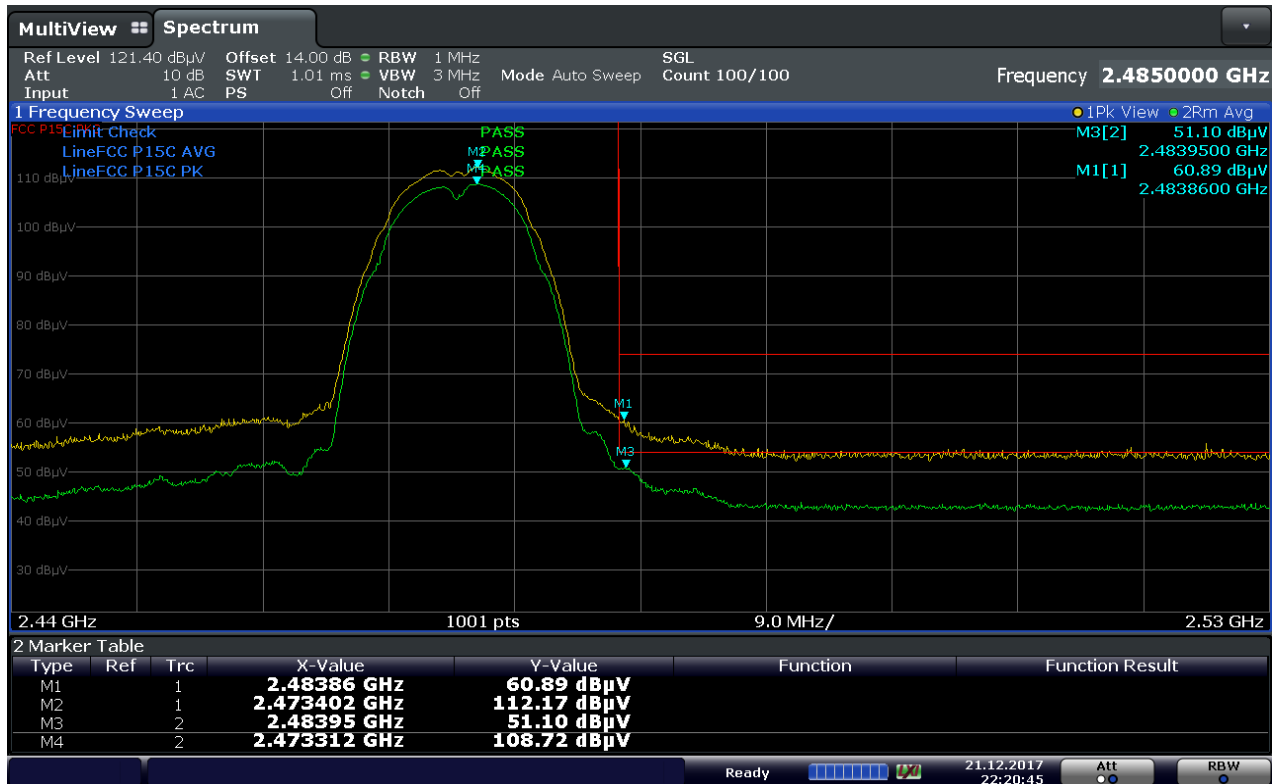


22:49:32 21.12.2017

Plot 7-171. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 131 of 157

Worst Case Mode: 802.11b
Worst Case Transfer Rate: 1Mbps
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13

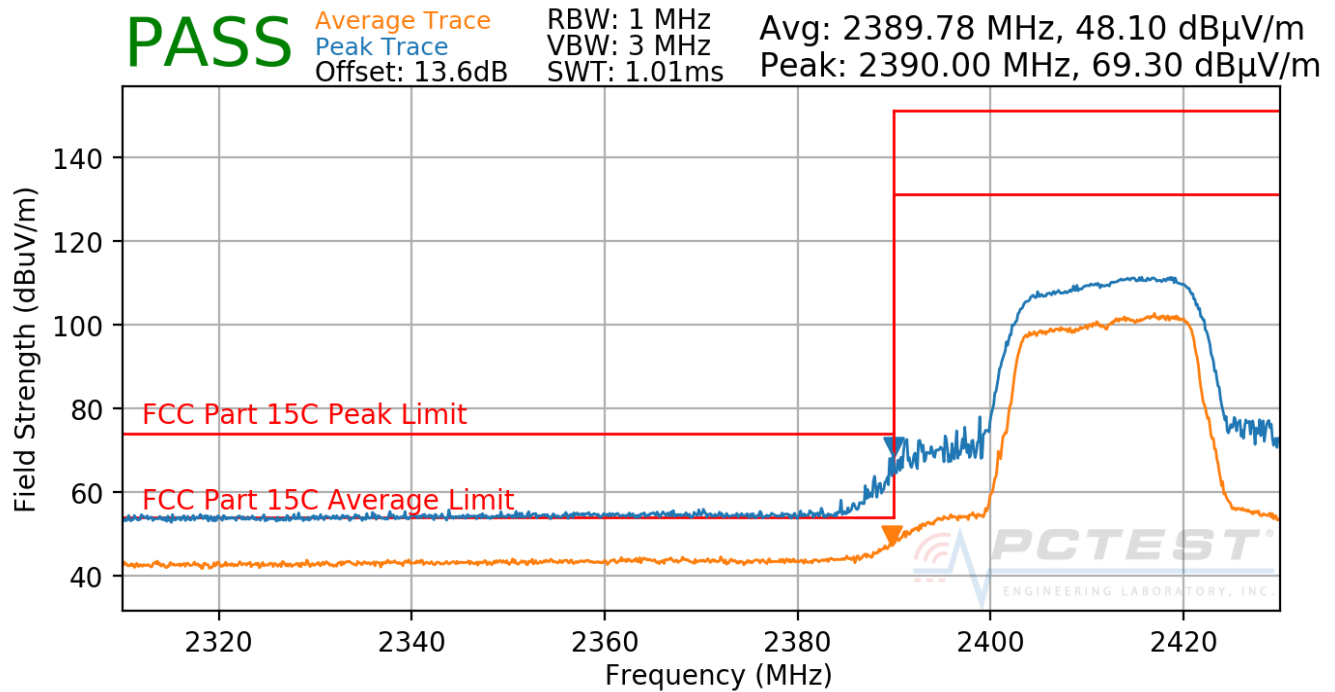


22:20:45 21.12.2017

Plot 7-172. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 132 of 157

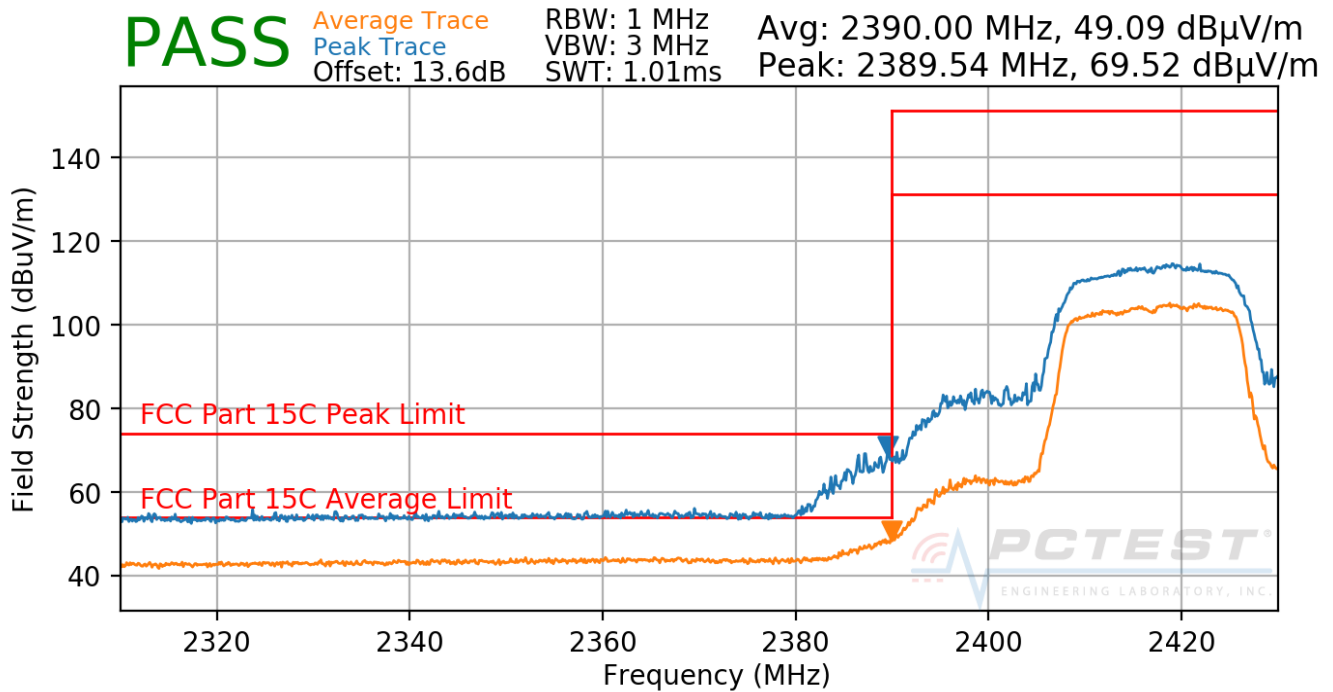
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2412MHz
Channel: 1



Plot 7-173. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 133 of 157

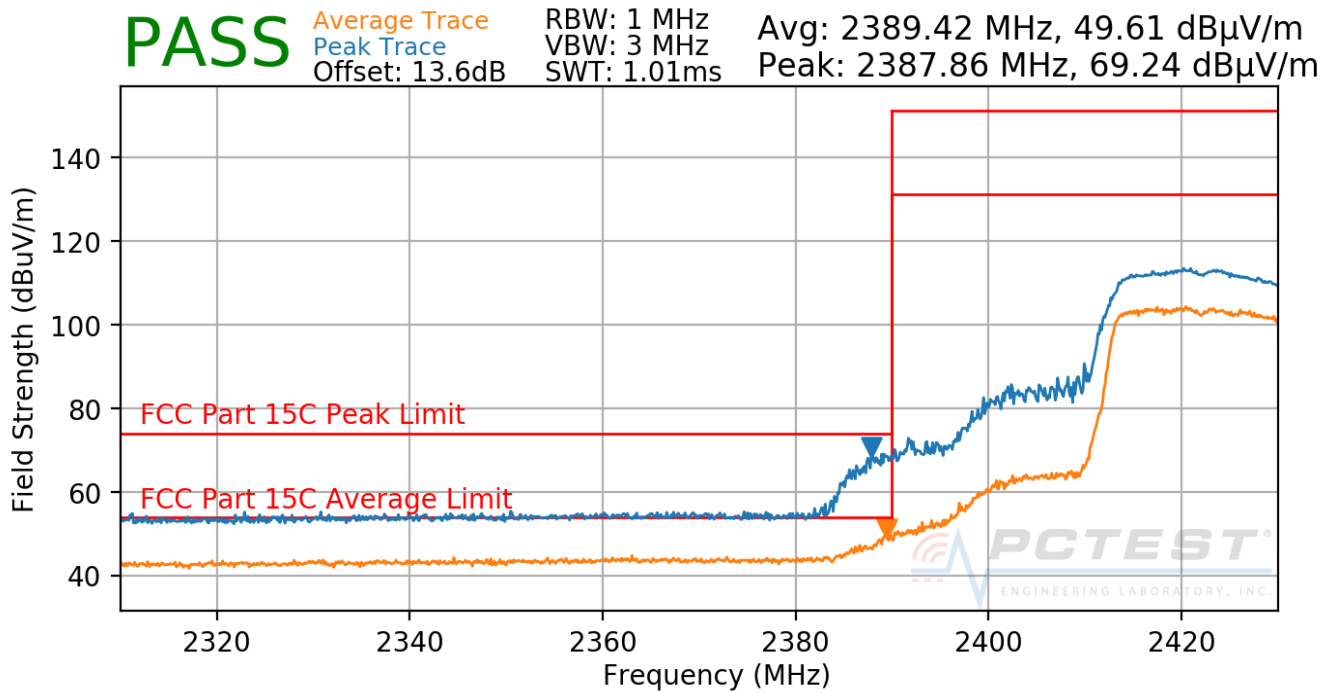
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2417MHz
Channel: 2



Plot 7-174. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 134 of 157

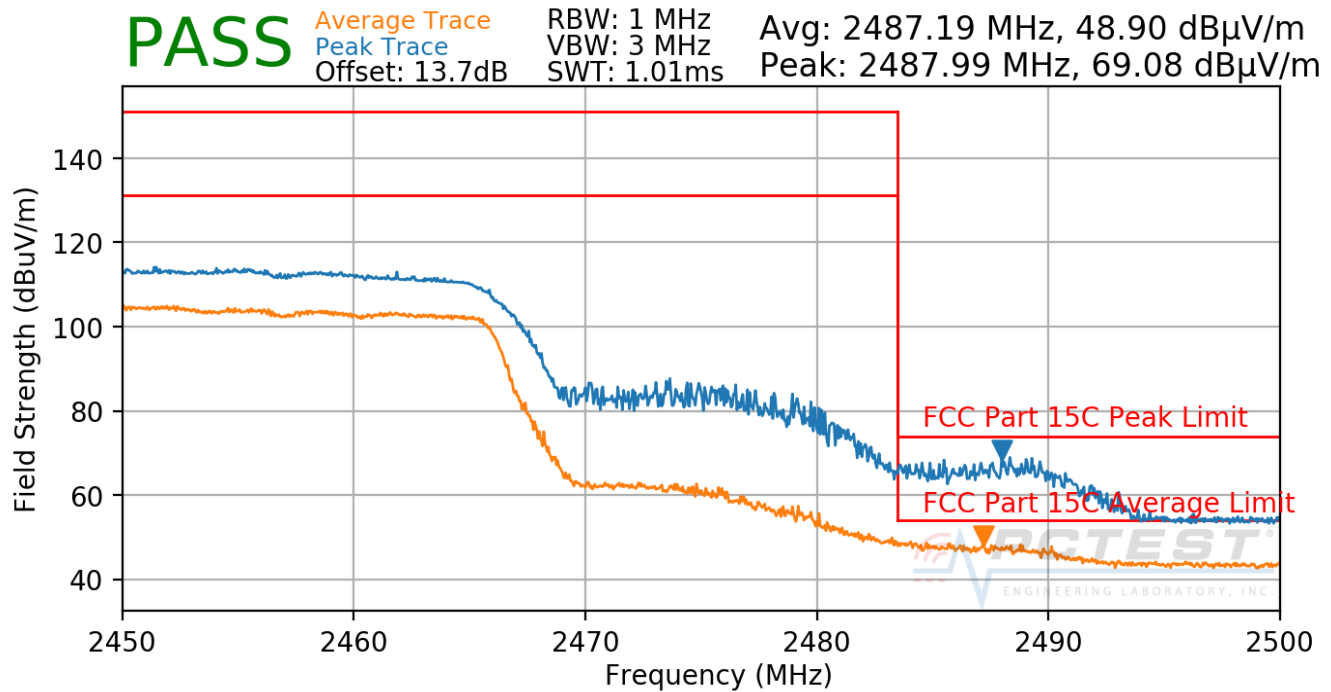
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2422MHz
Channel: 3



Plot 7-175. Radiated Restricted Lower Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 135 of 157

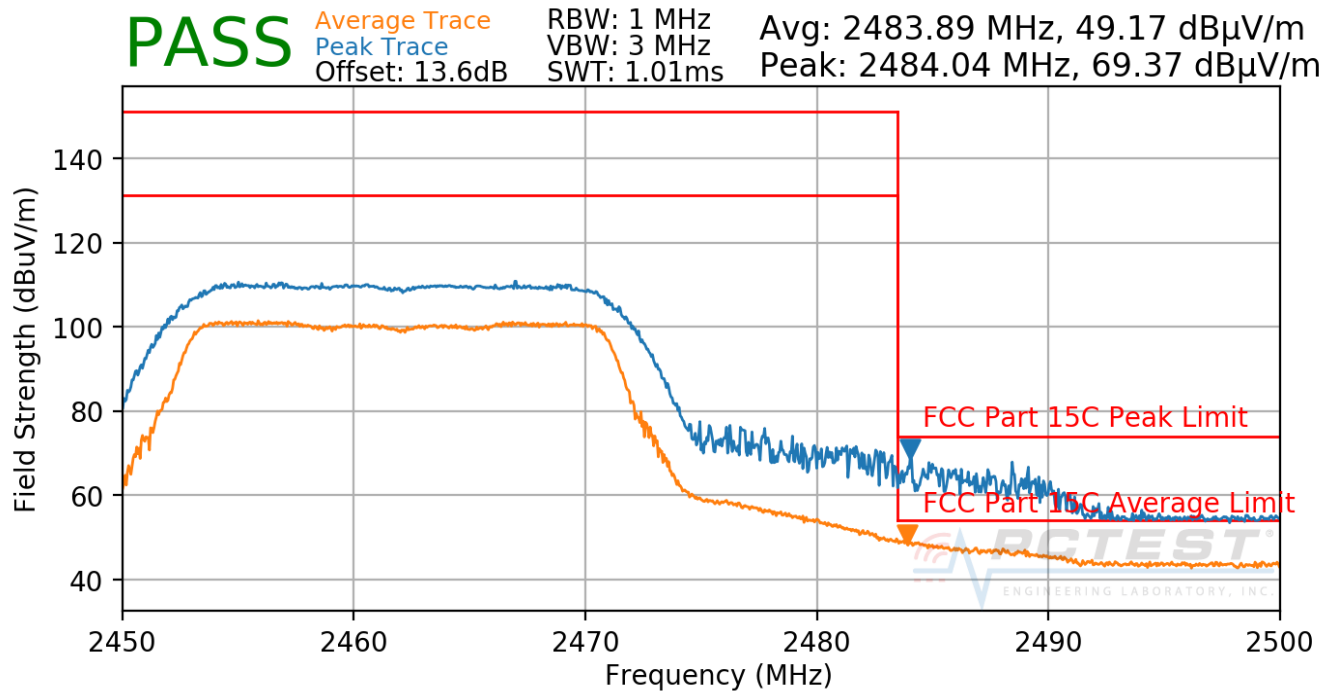
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2457MHz
Channel: 10



Plot 7-176. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 136 of 157

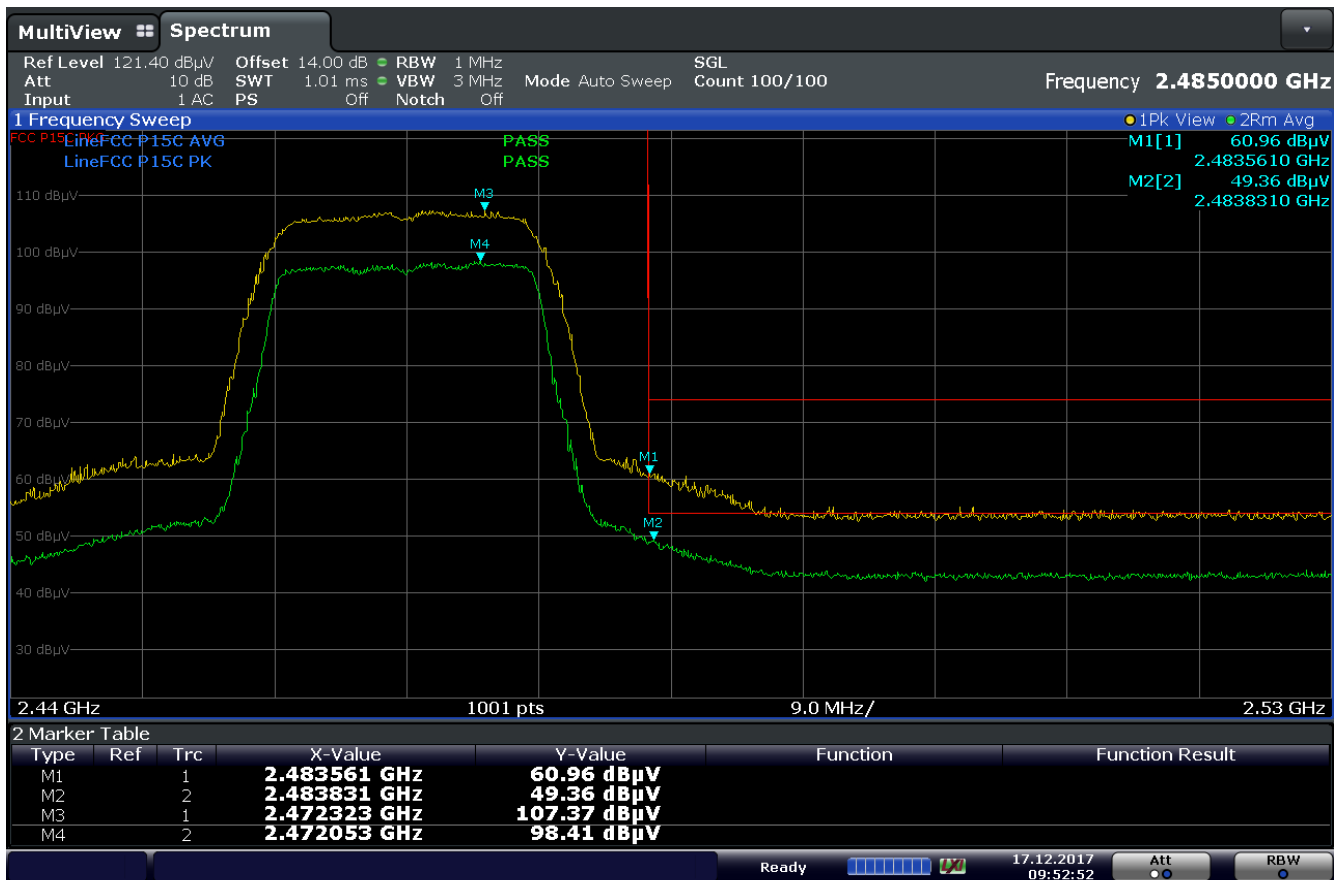
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2462MHz
Channel: 11



Plot 7-177. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 137 of 157

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2467MHz
Channel: 12

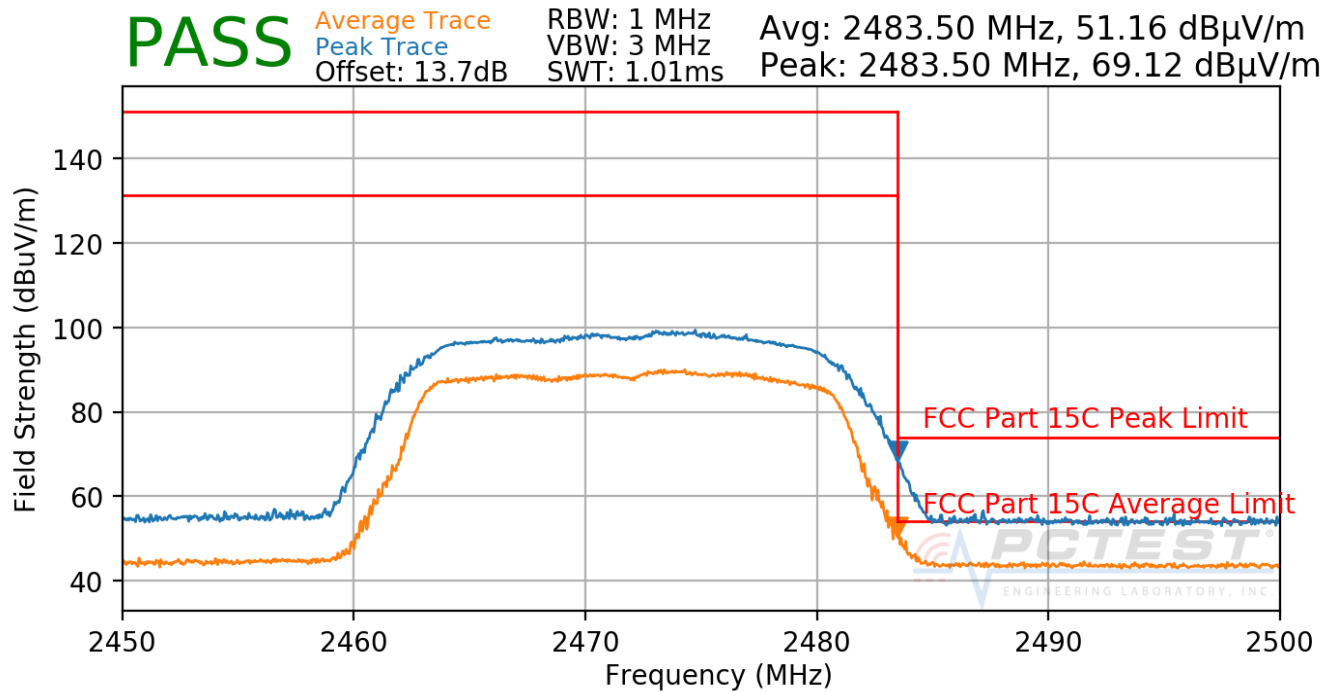


09:52:53 17.12.2017

Plot 7-178. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 138 of 157

Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS0
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13

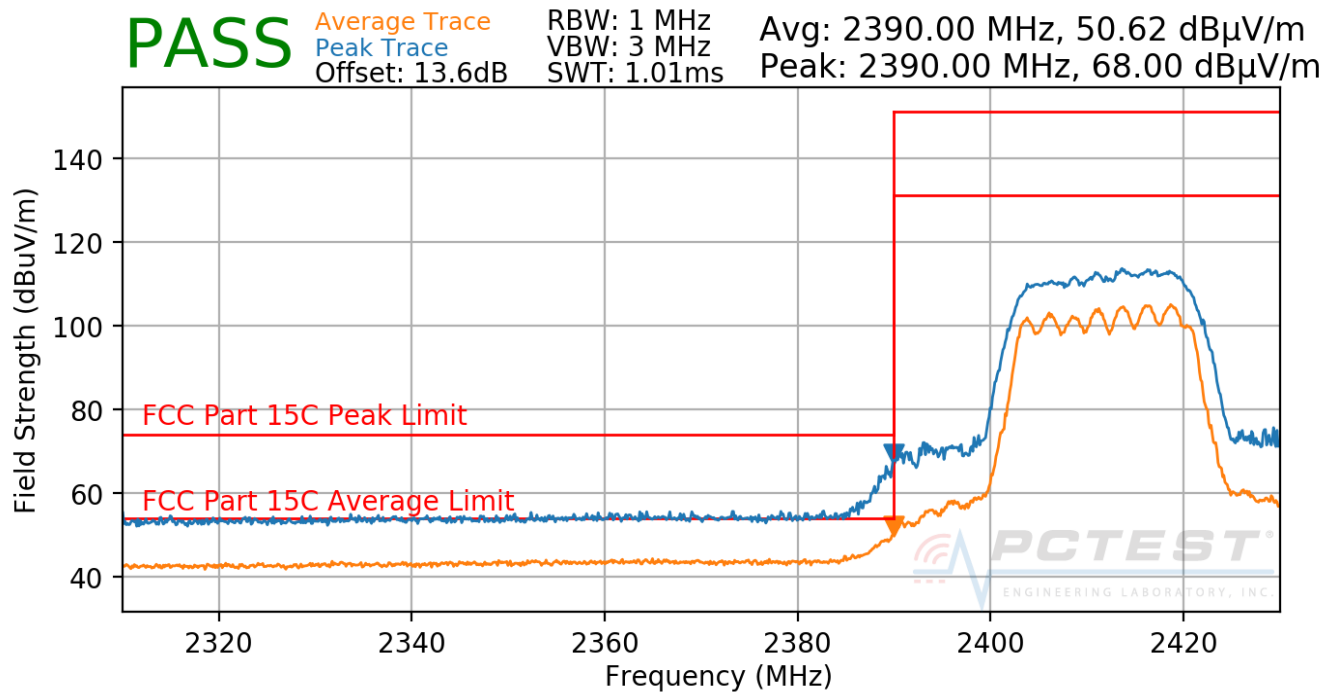


Plot 7-179. Radiated Restricted Higher Band Edge Measurement SISO ANT2 (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 139 of 157

7.7.6 MIMO Radiated Restricted Band Edge Measurements

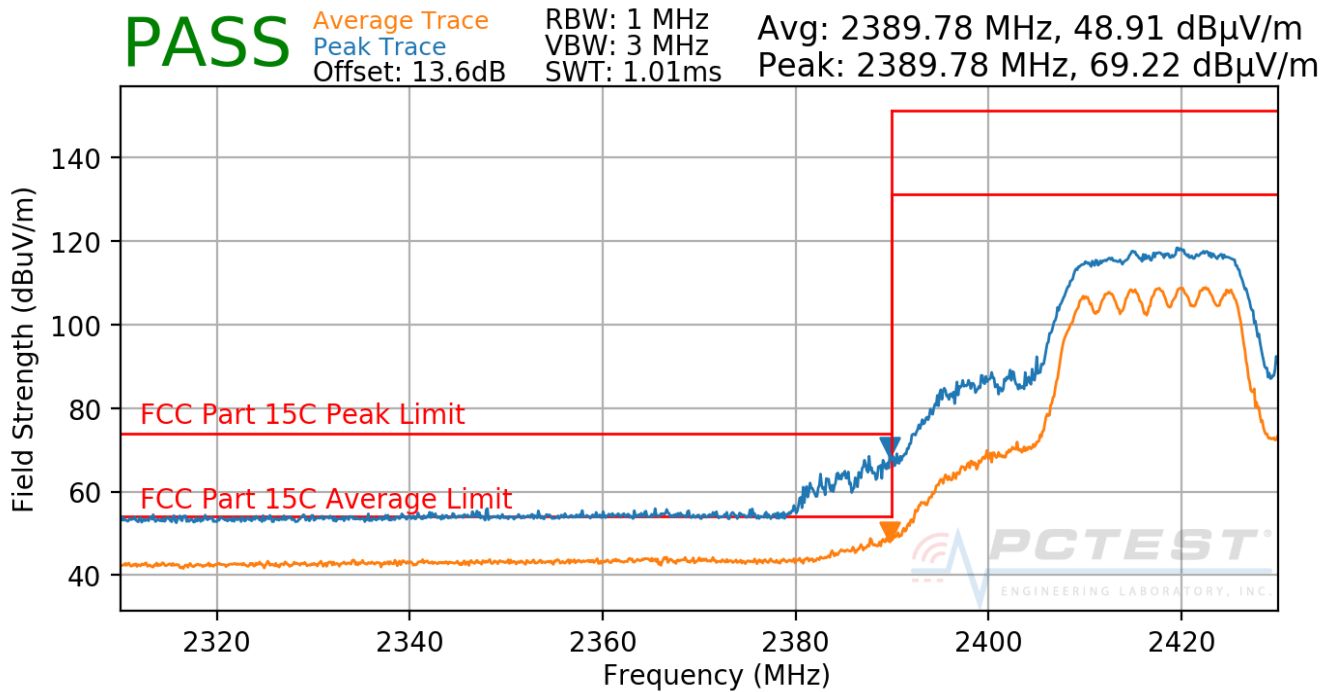
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2412MHz
Channel: 1



Plot 7-180. Radiated Restricted Lower Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 140 of 157

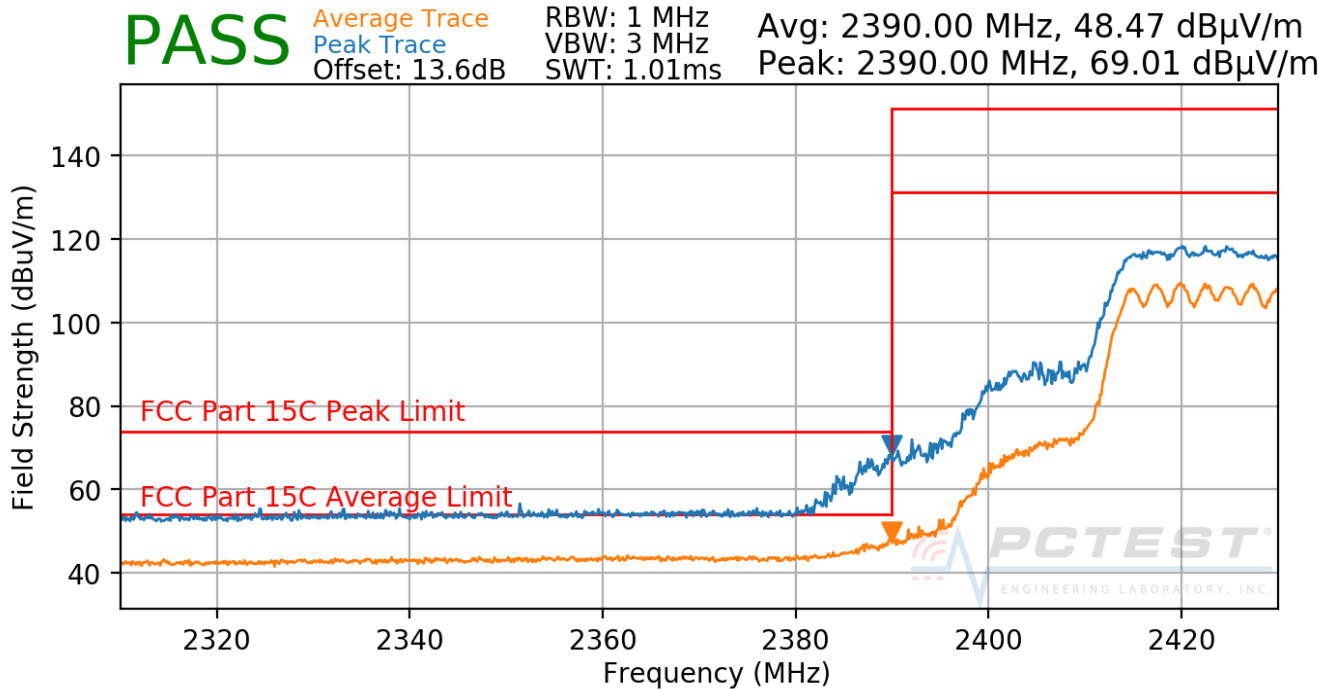
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2417MHz
Channel: 2



Plot 7-181. Radiated Restricted Lower Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 141 of 157

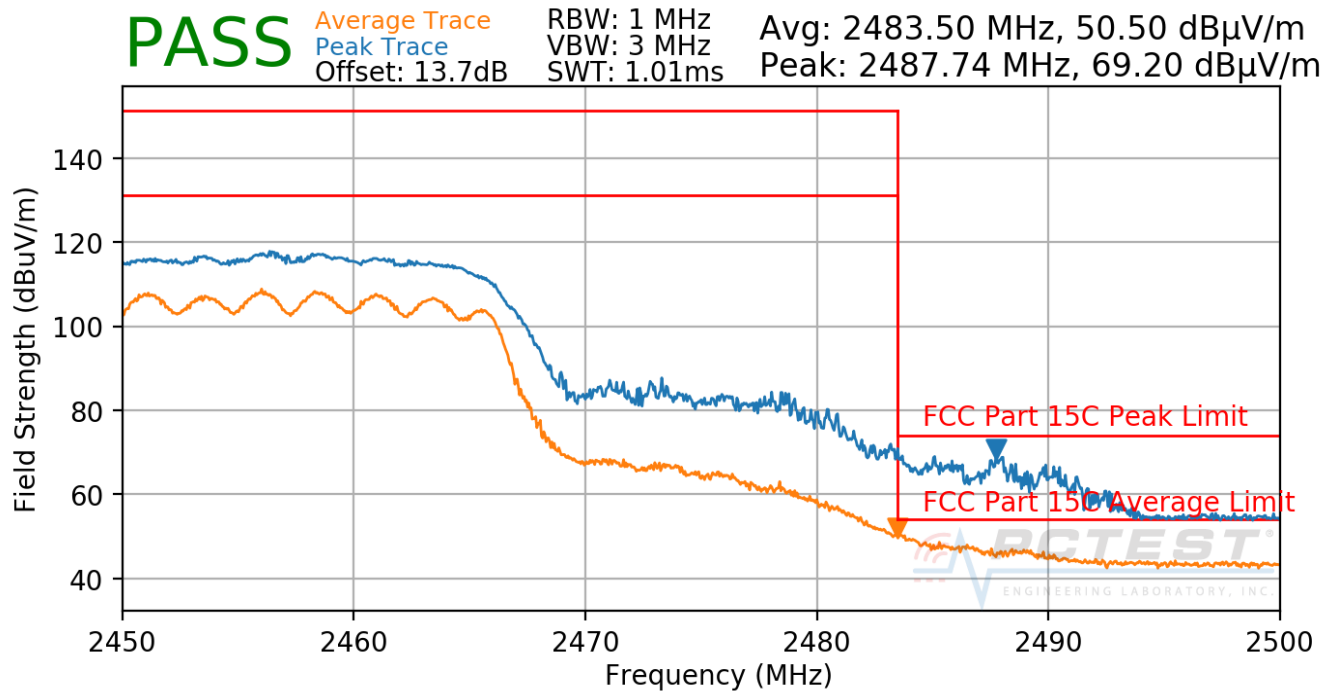
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2422MHz
Channel: 3



Plot 7-182. Radiated Restricted Lower Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
Test Report S/N: 1C1710060006-05.BCG	Test Dates: 10/31-2/17/2018	EUT Type: Tablet Device	Page 142 of 157

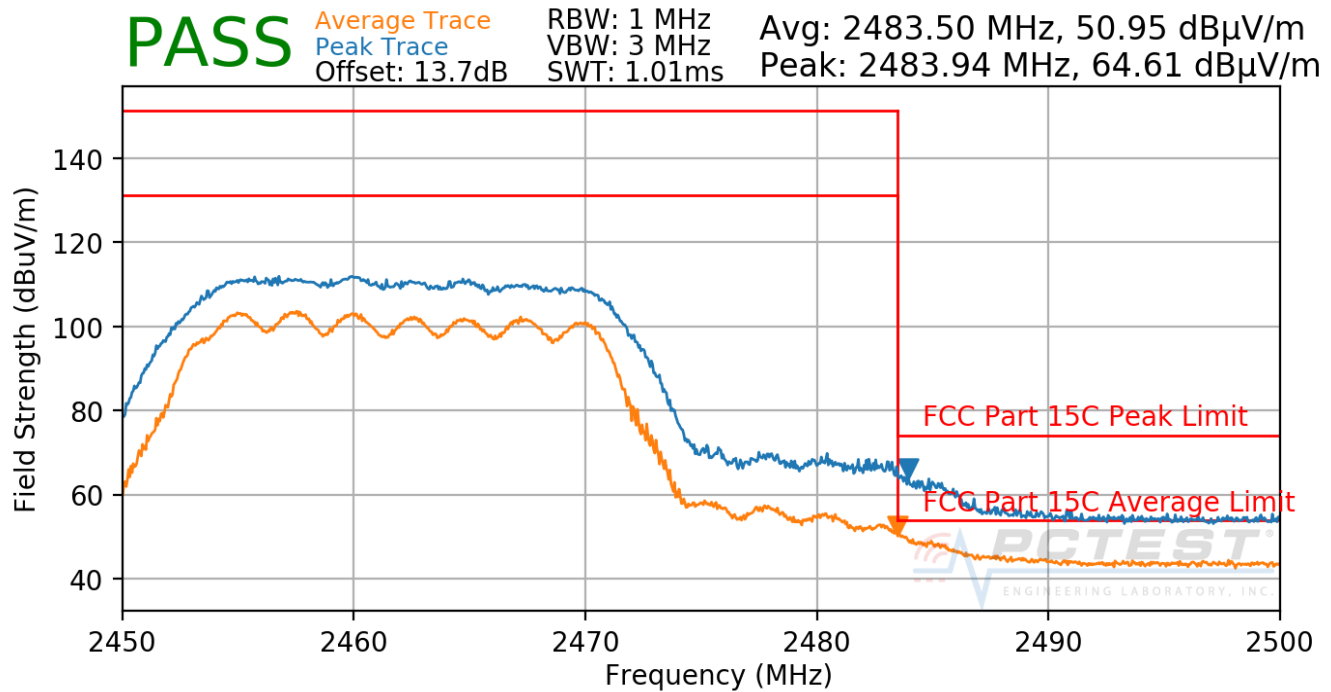
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2457MHz
Channel: 10



Plot 7-183. Radiated Restricted Higher Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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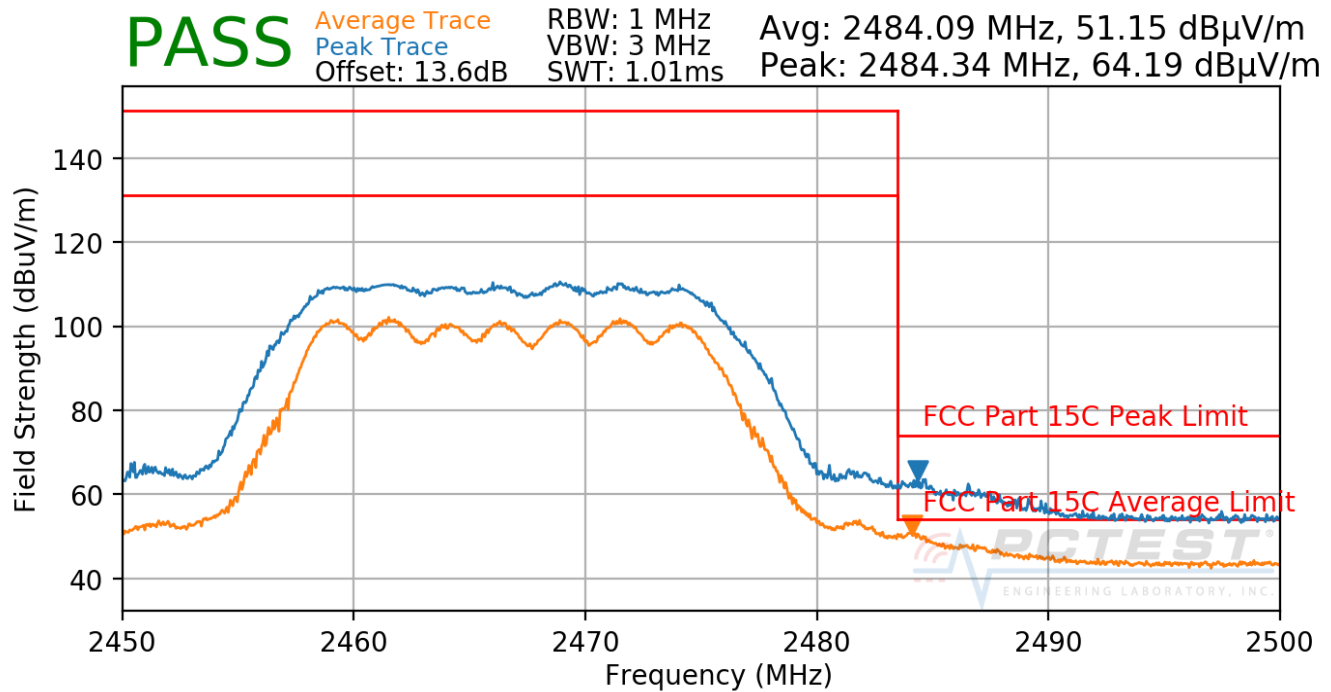
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2462MHz
Channel: 11



Plot 7-184. Radiated Restricted Higher Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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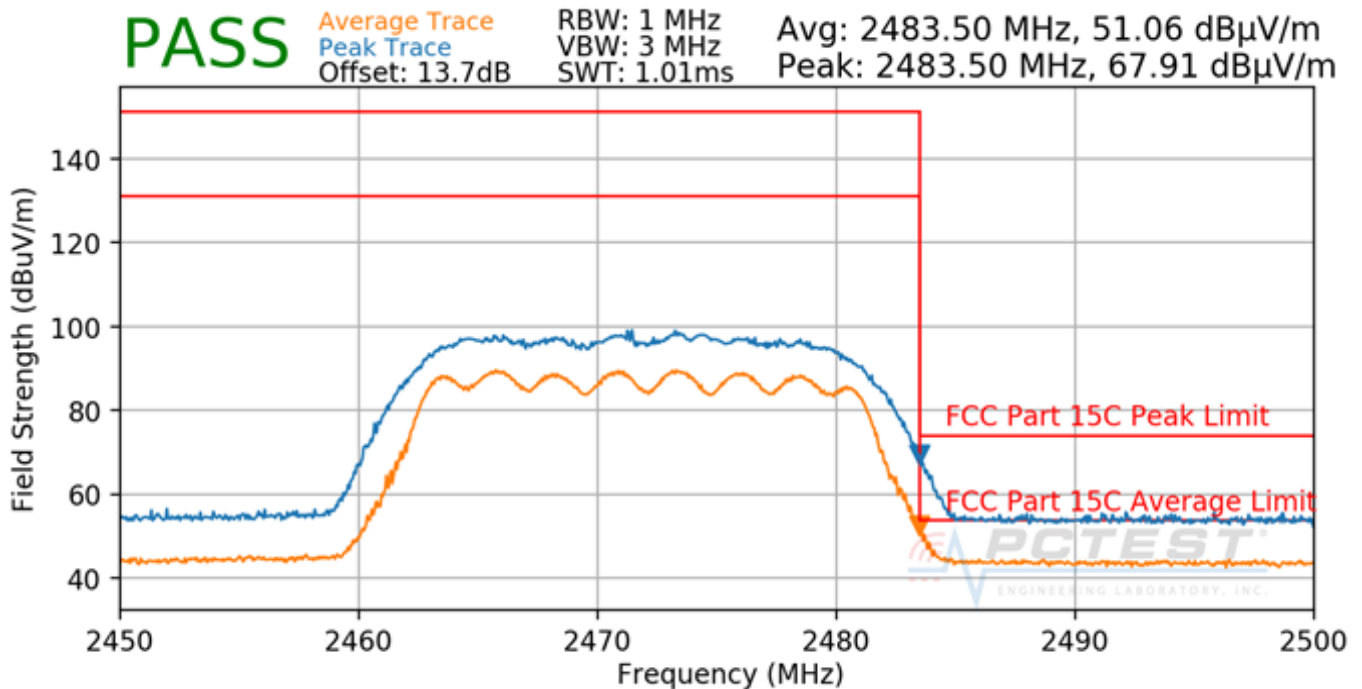
Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2467MHz
Channel: 12



Plot 7-185. Radiated Restricted Higher Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Worst Case Mode: 802.11n
Worst Case Transfer Rate: MCS8
Distance of Measurements: 3 Meters
Operating Frequency: 2472MHz
Channel: 13



Plot 7-186. Radiated Restricted Higher Band Edge Measurement MIMO (Average & Peak)

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.8 Radiated Spurious Emissions Measurements – Below 1GHz

§15.209; RSS-Gen [8.9]

Test Overview and Limit

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for radiated spurious emissions. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 6 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-26 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [$\mu\text{V/m}$]	Measured Distance [Meters]
0.009 – 0.490 MHz	2400/F (kHz)	300
0.490 – 1.705 MHz	24000/F (kHz)	30
1.705 – 30.00 MHz	30	30
30.00 – 88.00 MHz	100	3
88.00 – 216.0 MHz	150	3
216.0 – 960.0 MHz	200	3
Above 960.0 MHz	500	3

Table 7-26. Radiated Limits

Test Procedures Used

ANSI C63.10-2013

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 120kHz (for emissions from 30MHz – 1GHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagrams below.

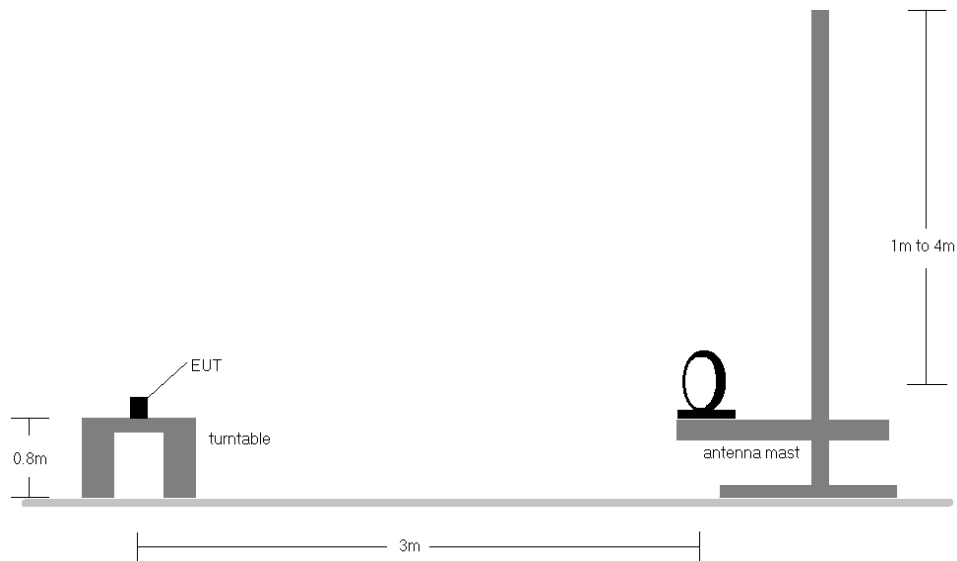


Figure 7-7. Radiated Test Setup < 30Mhz

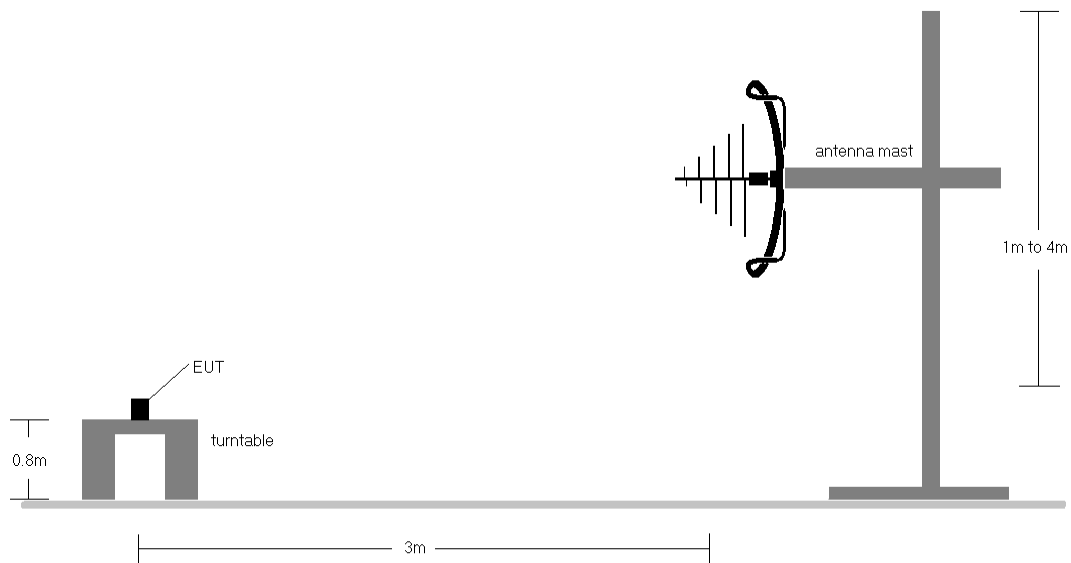


Figure 7-8. Radiated Test Setup < 1GHz

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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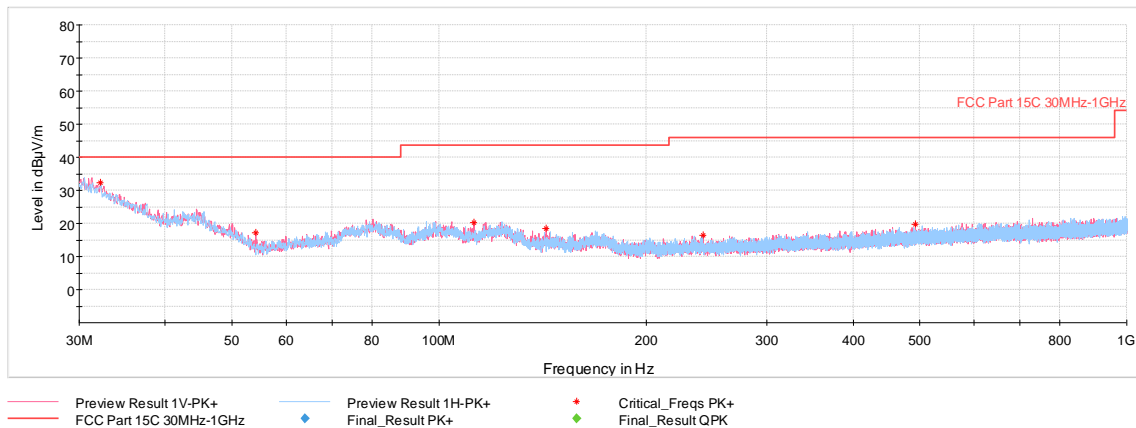
Test Notes

1. All emissions lying in restricted bands specified in §15.205 and RSS-Gen(8.10) are below the limit shown in Table 7-26.
2. The broadband receive antenna is manipulated through vertical and horizontal polarizations during the tests. The EUT is manipulated through three orthogonal planes.
3. This unit was tested with its standard battery.
4. The spectrum is investigated using a peak detector and final measurements are recorded using CISPR quasi peak detector. The worst-case emissions are reported however emissions whose levels were not within 20dB of the respective limits were not reported.
5. Emissions were measured at a 3 meter test distance.
6. Emissions are investigated while operating on the center channel of the mode, band, and modulation that produced the worst case results during the transmitter spurious emissions testing.
7. No spurious emissions were detected within 20dB of the limit below 30MHz.
8. The results recorded using the broadband antenna is known to correlate with the results obtained by using a tuned dipole with an acceptable degree of accuracy. The VSWR for the measurement antenna was found to be less than 2:1.
9. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. There were no emissions detected in the 30MHz – 1GHz frequency range, as shown in the subsequent plots.

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SISO Antenna-1 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-187. Radiated Spurious Plot below 1GHz SISO ANT1 (802.11b – Ch. 7, Pol. H & V)

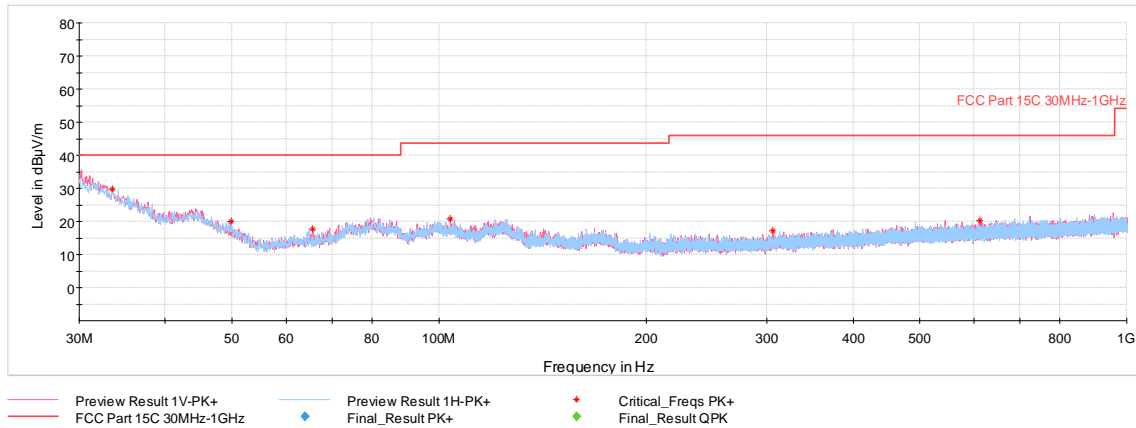
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
32.23	Quasi-Peak	H	-	-	-58.05	-16.74	32.21	40.00	-7.79
54.15	Quasi-Peak	V	-	-	-59.32	-30.52	17.16	40.00	-22.84
112.45	Quasi-Peak	V	-	-	-62.58	-24.04	20.38	43.52	-23.15
143.10	Quasi-Peak	V	-	-	-62.71	-25.70	18.59	43.52	-24.93
242.33	Quasi-Peak	V	-	-	-66.08	-24.60	16.32	46.02	-29.70
493.22	Quasi-Peak	V	-	-	-68.46	-18.86	19.68	46.02	-26.34

Table 7-27. Radiated Spurious Emissions below 1GHz SISO ANT1

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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SISO Antenna-2 Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-188. Radiated Spurious Plot below 1GHz SISO ANT2 (802.11b – Ch. 7, Pol. H & V)

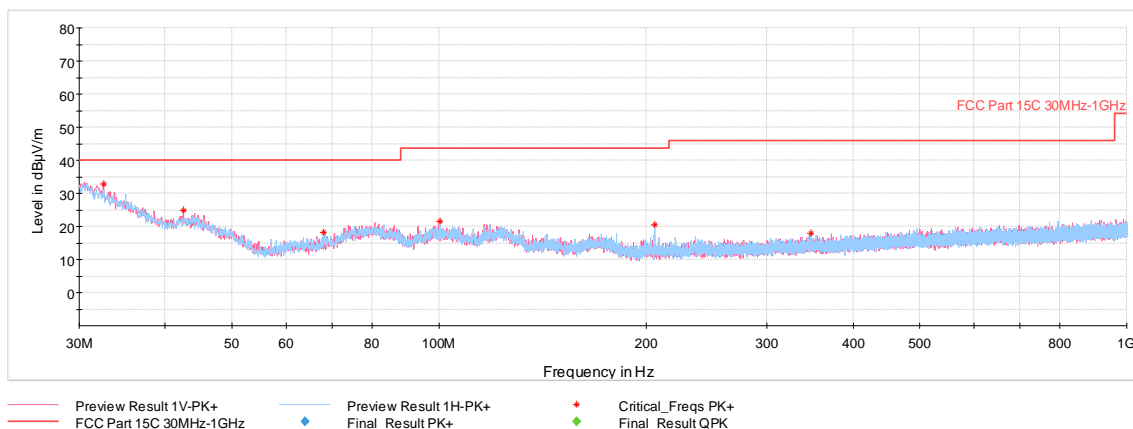
Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
33.46	Quasi-Peak	H	-	-	-59.76	-17.43	29.81	40.00	-10.19
49.84	Quasi-Peak	H	-	-	-59.46	-27.65	19.89	40.00	-20.11
65.55	Quasi-Peak	H	-	-	-61.44	-27.85	17.71	40.00	-22.29
103.96	Quasi-Peak	H	-	-	-61.84	-24.45	20.71	43.52	-22.81
306.11	Quasi-Peak	H	-	-	-66.85	-22.91	17.24	46.02	-28.78
611.52	Quasi-Peak	H	-	-	-69.75	-17.06	20.19	46.02	-25.83

Table 7-28. Radiated Spurious Emissions below 1GHz SISO ANT2

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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MIMO Radiated Spurious Emissions Measurements (Below 1GHz)

§15.209; RSS-Gen [8.9]



Plot 7-189. Radiated Spurious Plot below 1GHz MIMO (802.11n – Ch. 7, Pol. H & V)

Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBμV/m]	Limit [dBμV/m]	Margin [dB]
32.57	Quasi-Peak	V	-	-		-16.94	32.71	40.00	-7.29
42.51	Quasi-Peak	V	-	-		-22.54	24.96	40.00	-15.04
68.07	Quasi-Peak	H	-	-		-26.89	18.13	40.00	-21.87
100.37	Quasi-Peak	H	-	-		-24.48	21.45	43.52	-22.08
205.76	Quasi-Peak	H	-	-		-25.93	20.43	43.52	-23.09
347.29	Quasi-Peak	H	-	-		-21.91	17.95	46.02	-28.07

Table 7-29. Radiated Spurious Emissions below 1GHz MIMO

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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7.9 Line-Conducted Test Data

§15.207; RSS-Gen [8.8]

Test Overview and Limit

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section.

All conducted emissions must not exceed the limits shown in the table below, per Section 15.207 and RSS-Gen (8.8).

Frequency of emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56*	56 to 46*
0.5 – 5	56	46
5 – 30	60	50

Table 7-30. Conducted Limits

*Decreases with the logarithm of the frequency.

Test Procedures Used

ANSI C63.10-2013, Section 6.2

Test Settings

Quasi-Peak Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = quasi-peak
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

Average Field Strength Measurements

1. Analyzer center frequency was set to the frequency of the spurious emission of interest
2. RBW = 9kHz (for emissions from 150kHz – 30MHz)
3. Detector = RMS
4. Sweep time = auto couple
5. Trace mode = max hold
6. Trace was allowed to stabilize

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Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.

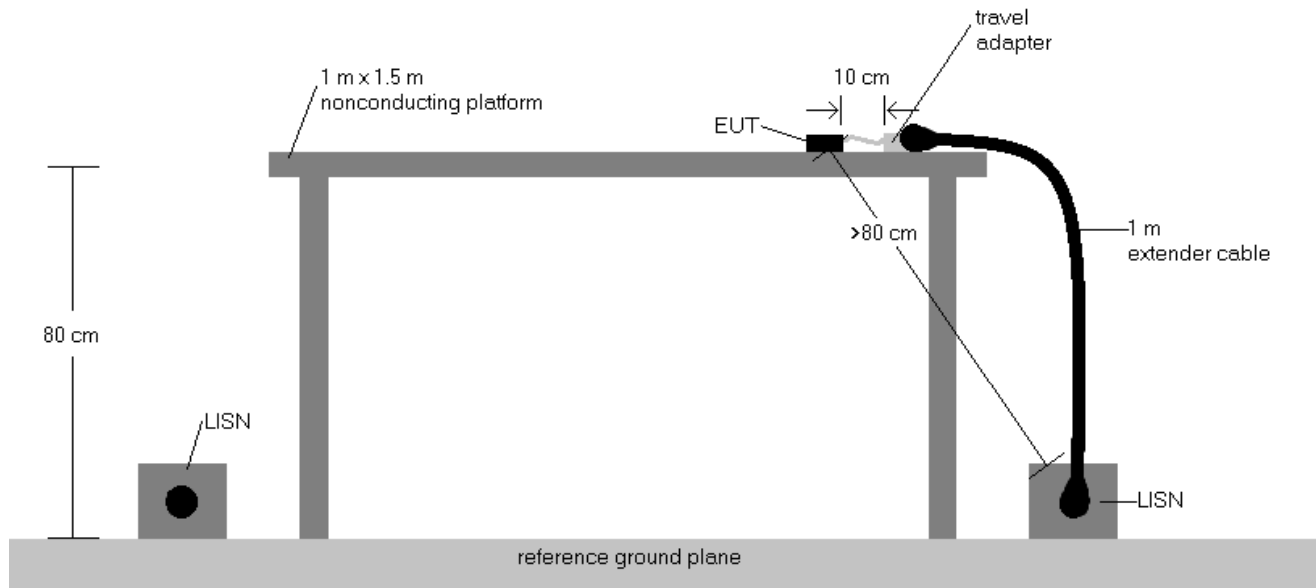
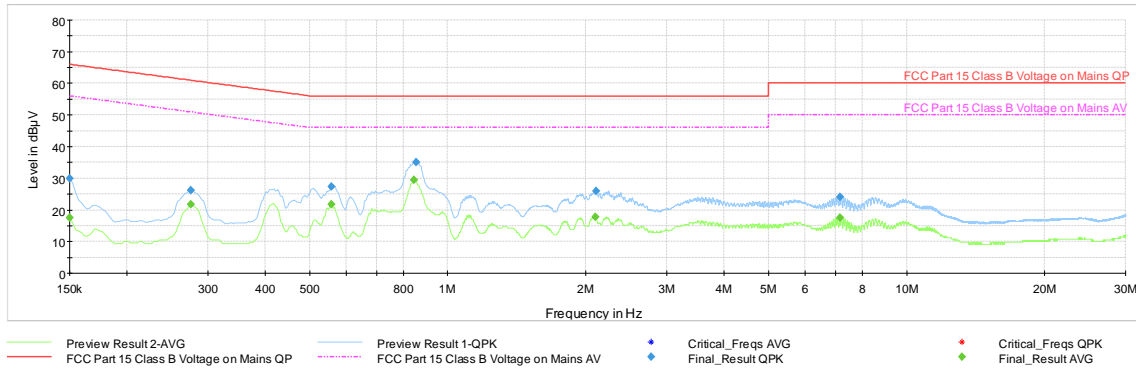


Figure 7-9. Test Instrument & Measurement Setup

Test Notes

1. All modes of operation were investigated and the worst-case emissions are reported using mid channel. The emissions found were not affected by the choice of channel used during testing.
2. The limit for an intentional radiator from 150kHz to 30MHz are specified in Part 15.207 and RSS-Gen(8.8).
3. $\text{Corr. (dB)} = \text{Cable loss (dB)} + \text{LISN insertion factor (dB)}$
4. $\text{QP/AV Level (dB}\mu\text{V)} = \text{QP/AV Analyzer/Receiver Level (dB}\mu\text{V)} + \text{Corr. (dB)}$
5. $\text{Margin (dB)} = \text{QP/AV Limit (dB}\mu\text{V)} - \text{QP/AV Level (dB}\mu\text{V)}$
6. Traces shown in plot are made using a peak detector.
7. Deviations to the Specifications: None.

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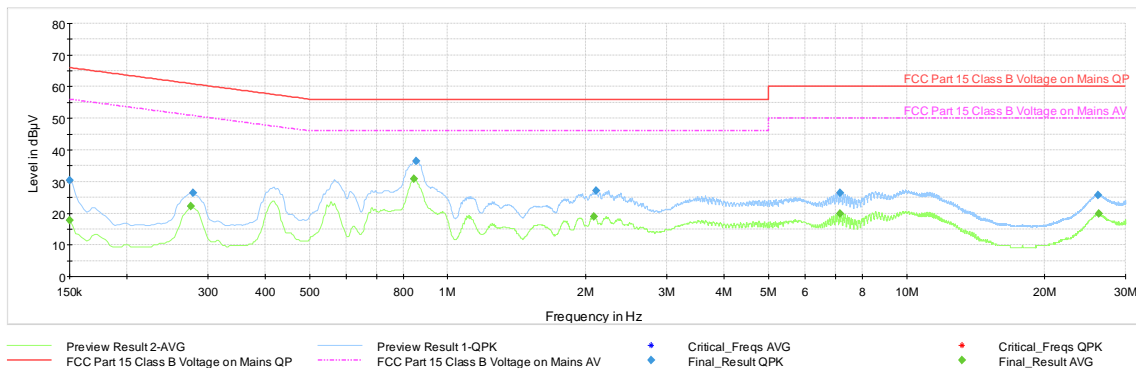


Plot 7-190. Line Conducted Plot with 802.11b (L1) SISO ANT1

Frequency MHz	Process State	QuasiPeak dBμV	Average dBμV	Limit dBμV	Margin dB	Meas. Time ms	Bandwidth kHz	Line	PE
0.150000	FINAL	29.97	—	66.00	36.03	10000.0	9.000	L1	GND
0.150000	FINAL	—	17.53	56.00	38.47	10000.0	9.000	L1	GND
0.276000	FINAL	26.13	—	60.94	34.81	10000.0	9.000	L1	GND
0.276000	FINAL	—	21.85	50.94	29.08	10000.0	9.000	L1	GND
0.557250	FINAL	—	21.85	46.00	24.15	10000.0	9.000	L1	GND
0.557250	FINAL	27.40	—	56.00	28.60	10000.0	9.000	L1	GND
0.843000	FINAL	—	29.50	46.00	16.50	10000.0	9.000	L1	GND
0.854250	FINAL	35.11	—	56.00	20.89	10000.0	9.000	L1	GND
2.096250	FINAL	—	17.77	46.00	28.23	10000.0	9.000	L1	GND
2.105250	FINAL	25.98	—	56.00	30.02	10000.0	9.000	L1	GND
7.147500	FINAL	—	17.45	50.00	32.55	10000.0	9.000	L1	GND
7.154250	FINAL	24.12	—	60.00	35.88	10000.0	9.000	L1	GND

Table 7-31. Line Conducted Table with 802.11b (L1) SISO ANT1

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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Plot 7-191. Line Conducted Plot with 802.11b (N) SISO ANT1

Frequency MHz	Process State	QuasiPeak dBμV	Average dBμV	Limit dBμV	Margin dB	Meas. Time ms	Bandwidth kHz	Line	PE
0.150000	FINAL	30.40	—	66.00	35.60	10000.0	9.000	N	GND
0.150000	FINAL	—	17.72	56.00	38.28	10000.0	9.000	N	GND
0.276000	FINAL	—	22.25	50.94	28.69	10000.0	9.000	N	GND
0.278250	FINAL	26.36	—	60.87	34.51	10000.0	9.000	N	GND
0.843000	FINAL	—	30.97	46.00	15.03	10000.0	9.000	N	GND
0.854250	FINAL	36.42	—	56.00	19.58	10000.0	9.000	N	GND
2.085000	FINAL	—	18.95	46.00	27.05	10000.0	9.000	N	GND
2.105250	FINAL	27.06	—	56.00	28.94	10000.0	9.000	N	GND
7.147500	FINAL	—	19.95	50.00	30.05	10000.0	9.000	N	GND
7.149750	FINAL	26.35	—	60.00	33.65	10000.0	9.000	N	GND
26.083500	FINAL	25.79	—	60.00	34.21	10000.0	9.000	N	GND
26.214000	FINAL	—	19.81	50.00	30.19	10000.0	9.000	N	GND

Table 7-32. Line Conducted Table with 802.11b (N) SISO ANT1

FCC ID: BCGA1954	MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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8.0 CONCLUSION

The data collected relate only the item(s) tested and show that the **Apple Tablet Device FCC ID: BCGA1954** is in compliance with Part 15 Subpart C (15.247) of the FCC Rules and RSS-247 of the Innovation, Science and Economic Development Canada Rules.

FCC ID: BCGA1954	 MEASUREMENT REPORT (CERTIFICATION)		Approved by: Quality Manager
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